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Lecture.

THE DISEASES OF PREGNANCY.

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Albuminuria.

(*Continued from page 7.*)

Gentlemen: We will return this morning to the subject which engaged our attention at the last lecture, the diseases of pregnancy. At the close of the hour we were considering albuminuria of pregnancy, to which I would again direct your attention. We saw that the cause of this disorder could not be due alone to pressure of the gravid uterus. Although there are certain facts which go to show that pressure may have something to do with the production of it. There are certain conditions, as in large fibroid tumors of the uterus, ovarian tumors, etc., in which the interference with the renal circulation from pressure is greater than that in pregnancy, but in which, nevertheless, albuminuria does not exist.

The true explanation of the albuminuria of pregnancy is not that it is due to any one cause, for we find, if we take any one of the alleged causes and try to account for the presence of all cases on that basis alone, that there are instances in which such an explanation is not at all satisfactory. In some cases it is due to one condition, in others to another; but in all cases we find underlying the albuminuria of pregnancy a condition of the blood which certainly predisposes to it. The condition of the mother's blood during pregnancy is all the time, as it were, in a deteriorated state, and this condition is exaggerated in the placenta by the giving up on the part of the fœtus, to the mother's circulation, various impurities. When to this state of the mother's blood the condition of pressure of the gravid uterus is added, you have, in certain cases, the two causes which go to produce albuminuria. Some writers, especially those across the water, claim that many of the cases of pregnancy in which albuminuria is present, but which go on to full term and are delivered successfully, terminate, in a comparatively short period of time, in death from Bright's disease of the kidney. If this were the case I should be much more anxious than I am at present, upon finding albumen in the urine of a pregnant woman; but I do not believe that it holds true, at least in this country. I have had patients who suffered from the albuminuria of pregnancy ten or fifteen years ago bear several children since, and are perfectly well to-day. In one of these cases the attack of albuminuria in the first pregnancy was so severe that I was compelled to resort to venesection three times in order to reduce the congestion of the kidney. Some cases of chronic Bright's disease of the kidney may be supposed to arise in an attack of albuminuria during pregnancy, when, in fact, it dated back a number of years earlier, to an attack of, perhaps, scarlet fever, and was simply aggravated during pregnancy in a manner then to show for the first time symptoms which would attract the attention of the patient or physician. But a simple case of albuminuria of pregnancy, I believe, will pass away under proper treatment. If not properly cared for, it may result in eclampsia and destroy life, but I have never seen a patient die in con-

sequence of remote effects of the albuminuria of pregnancy, say within a year or two after delivery, the symptoms of albuminuria in the meantime having subsided.

The appearance of any amount of albumen in the urine during pregnancy always gives me more or less anxiety, for I cannot tell to what extent it may go. If it appear in large amount and continue for some time, it will almost surely result in convulsions, one of the worst accidents which can befall a pregnant woman. Therefore, whenever a pregnant woman passes urine which contains more or less albumen, she should be kept under observation until after confinement. It is my rule always to examine the urine at stated intervals before confinement; and if a woman refuse to conform to this rule, and let me have a specimen of the urine as often as directed, for examination, I will not attend the case in labor; for, should any unfavorable symptoms develop in the meantime, the physician is the one on whom the blame falls.

Symptoms.—I will again speak of the symptoms associated with albuminuria of pregnancy, one of which is the presence of albumen in the urine. Headache. If this be persistent, and present every morning when the patient wakes, it should never go unheeded, but should lead to an examination of the urine. Œdema. This is especially to be regarded if it occur in the face and upper extremity, not alone in the ankles and feet. Vomiting, especially when it occurs after the first weeks, and is not to be accounted for by other conditions, is a symptom of albuminuria. Then there is a feeling of depression. The patient does not feel certain that she is as well as she would like to be. Then, trouble with vision, seeing motes floating in the air, etc., along with other symptoms just mentioned, as gastric irritability, headache, œdema of the face, a moderate amount of albumen in the urine, indicates a condition which requires pretty active treatment. Now, these symptoms of gastric irritation, of convulsions, etc., have been ascribed to a uræmic condition of the blood, and to the existence of particular poisonous properties in the blood. Now, we can say this, at any rate, that the kidneys, while they are secreting this large amount of albumen from the blood, are not taking away the effete matter which they should, and which, therefore, is allowed to remain in the circulating fluid to produce the disturbances belonging to albuminuria. This frequently causes imperfect development in the fœtus, sometimes leading to abortion, sometimes to a still-born labor, sometimes to an imperfectly developed child. I have seen a good many cases in which the albumen in the urine was moderate in amount, but led to labor at the seventh or eighth month, and to the birth of a small, shriveled, dead child.

The *prognosis* will depend upon the degree of congestion of the kidney, upon the general condition of the patient, and upon the question as to whether she will be properly treated. If let alone, the prognosis is bad; if properly treated, the prognosis is fair. There is always a certain amount of danger connected with these cases, shown by the fact that in twenty per cent., if let alone, you will have convulsive seizures. Now, the convulsive seizure may occur long before time for parturition. The prognosis in one case might be good, while in another it might be unfavorable. You meet with this condition much more frequently in primipara than in multipara, the reason being that, the abdominal walls not yet having been distended by a previous pregnancy, the kidneys are more pressed upon. I have a patient now in whom I examine the urine twice a fortnight, morning and evening. The morning urine did contain twenty-five per cent. of albumen; it now contains ten per cent.; while the evening urine contains only one-half of one per cent. I believe that in this case the presence of an extra amount of albumen in the urine in the morning is due to the recumbent position, causing pressure upon the kidneys during the night. When the patient stands up the uterus falls forward and the renal veins are less pressed upon.

The amount of albumen will sometimes lead us to correctly estimate the prognosis; in others it will not. A small amount of albumen with the presence of nervous symptoms before alluded to shows a case that is far worse than one in which there is a good deal of albumen without any nervous symptoms. You may have a case in which there is fifty per cent. of albumen for a week, and if uræmic symptoms do not develop, you may carry your patient through and deliver her of a healthy child.

Treatment.—You will infer, from what I have said, that the treatment is not by any means the same in all cases. You do not, for instance, always commence by giving cathartics. I will first speak of the treatment of a mild case, then of one more severe, and then of one quite severe.

You may examine the urine of a pregnant woman, say, after the fifth or sixth month, and at your first examination you may find ten per cent. of albumen; at the next, fifteen per cent.; and at still the next, twenty per cent.; there you have a case which is developing pretty rapidly in

this particular symptom, and yet the patient has no nervous symptoms. She may then eat too much food, particularly that of a nitrogenous character, after which she complains of headache on first rising in the morning, the headache, perhaps, disappearing after she has been about the house a while. Still, if this patient passed an ordinary amount of urine, there would be no necessity for treatment which could at all be called heroic. I would first see that she had a regular movement from the bowels every day, and for this purpose I would use some saline that would produce an exosmosis from the vessels in the intestine. The pathological condition, you will remember, is one of congestion of the kidney, with pressure, and our object is to relieve this, and yet not deplete the patient more than is necessary. We can make the intestine and the skin do pretty much all the work necessary to be done by the kidney, but which in its present condition the kidney fails to do. Having, by the saline cathartic, produced a fluid movement every morning, the patient should be put upon milk diet. I mean by milk diet, that the woman have no other food during the twenty-four hours. The quantity of milk necessary to keep a person from feeling hungry, and to keep up the nutrition of the body, is somewhere from three to four quarts. Most women will take three quarts of milk without difficulty; four quarts may be a little irksome to take, but if they feel hungry they can easily add to the three quarts a fourth. I generally get them to take this amount by telling them to take a glass every hour during the day, and at mealtime to take about three glasses. Milk, taken in this way, is easily assimilated, and is not likely to cause the patient any digestive inconvenience; but, if necessary, you may add to it some lime water. You know that in many cases of Bright's disease, treated by giving the patient a milk diet, and keeping him in an equable temperature, life has been prolonged a long time. If, by this treatment, the amount of albumen in the urine greatly diminishes, the patient might be allowed to take with the milk some other simple nourishment; but should the amount of albumen again increase in quantity, I would put her back again upon the exclusively milk diet. This simple treatment will answer for some cases. Another point I would add, namely, that if the blood seem to be hydræmic, and there can be heard an anæmic bruit, the patient should be given iron. For this purpose I find the tincture of chloride of iron one of the best preparations of this drug. I have never seen it produce any tendency toward miscarriage, which some claim that it does. It may be administered in ten-drop doses, three times a day, and the patient will often be greatly benefited by it.

Now, suppose a patient, at the sixth or seventh month, takes a ride out in the park, without sufficient flannel clothing, exposing herself to the cold, and at night finds that she passes only a small quantity of urine; in the morning waking up with a severe headache, but without any stomach disturbance. When you are now called to see her, she complains of severe headache, and of dimness of vision, due to headache, and on examining the urine you may find that it contains sixty per cent. of albumen, whereas, three or four days prior, it was perfectly clear. Now, it would not do to treat such a case simply in the way that was mentioned above. The thing to do for that patient is to take away some blood. I do not mean by cupping, but by the lancet. I am aware that bleeding has gone out of fashion, but how many other things have gone out of fashion to be renewed again on proper occasions? and I believe that bleeding will again be resorted to more frequently than it is now. I have bled patients during pregnancy, time after time, and with the best results. I find that in some cases venesection controls the tendency to eclampsia in albuminuria as nothing else will do. There may not be so many people at the present day who would bear bleeding as well as those of many years ago, but when you have a patient, a plethoric woman, with the above-mentioned symptoms, I would advise you to bleed her at once. The result of this venesection is that the headache disappears. In one case in which I bled a patient, when I first saw her she had the kind of headache referred to, and great dimness of vision. The amount of urine passed was quite small, and on boiling it there was absolute solidification, from the presence of albumen. I bled her, and it was the opinion of two physicians who saw her afterward, as well as my own, that had she not been bled she would have died in convulsions within twenty-four hours. There was already slight twitching of the muscles of the eyelid. Sixteen ounces of blood were withdrawn, and the patient then remarked that the headache had disappeared. She was then given ten grains of calomel, which produced a free evacuation from the bowels, and afterward she received a diuretic. The result of this treatment was that she continued to do well for two or three weeks, when the symptoms became such as to require bleeding again, and two or three weeks subsequently she was bled a third time. In a consultation of three physicians it was unanimously decided that

premature labor should be induced. She was also bled a fourth time. Now, I have attended that woman in five pregnancies since, and she is perfectly well to-day.

If, however, the condition of the patient does not make you feel justified in withdrawing blood from the arm, you will find benefit to arise from placing cups, wet or dry ones, over the loins. If the patient be one of those women whose state is always one either of perfect bliss or excruciating torture, you may apply dry cups. As soon as you put them on the patient will tell you that they cause her intense agony, and that they must be removed; but expecting this beforehand, you will be talking about something else, and thus divert her thoughts until sufficient time has slipped away to produce decided benefit by this method of counter-irritation. In the meantime you will have sent a couple of pounds of flaxseed meal to the kitchen to be prepared as a poultice, which you will place between two layers of linen cloth and apply to the parts yourself, or have somebody to do it to whom you have given explicit instructions. When you want a warm poultice applied, if you do not give explicit directions as to how it shall be made and put on, it will probably be done as most people do it, made and applied as thin as a buckwheat cake. A poultice of that description cannot retain heat and moisture any length of time. It must be made an inch or an inch and a half thick, and large enough to cover the patient's back at the loins. A bandage should then be applied, as in parturition, and the patient should lie abed. Then, after giving her some cathartic, either calomel or a saline, administer some diuretic, and a very good one is the citrate of potassa, say ten grains every three or four hours, together with an infusion of digitalis, which of itself is a diuretic, but a much more efficient one when mixed with the citrate. The patient will probably be thirsty, and a good drink is one of the mineral waters, say the Apollinaris, the Vichy, or the Seltzer. A small quantity of bitartrate of potassa added to a good deal of water, and flavored with a little of the oil of lemon, makes a very good artificial drink, which acts as a diuretic.

By these means you can sometimes diminish the quantity of albumen in the urine, from fifty per cent. to five per cent. within twenty-four hours, and get your patient absolutely out of danger for the time being. I would then place her upon a milk diet, and have her live in a tolerably quiet way. And a word with regard to living in a quiet way. I have noticed over and over again that patients with albuminuria in pregnancy, especially those of nervous susceptibility, do well enough as long as they live up to the rules you prescribe for them, but the moment they go beyond them the quantity of albumen again increases. They will go, for example, to a dinner party, or to the theatre, or opera, where the atmosphere is unfit to breathe, being loaded with carbonic acid. Then visit one of the fashionable resorts and have a late supper. The next morning you will, perhaps, find fifty per cent. of albumen in the urine.

Taking an unusual amount of exercise, but an amount which would not fatigue a healthy adult, will increase the quantity of albumen in the urine of these patients. Now, you wish your patient to get the benefit of fresh air, and yet she must avoid too much exercise, and you are, therefore, at a loss to know what is best—to recommend her to go out in the open air, or to remain at home. Of this, however, I am certain, that in order to get fresh air, the patient should sleep in a room in which the window is left wide open, and as a protective against cold she should sleep in flannel clothing. Now, I am sure you can have no conception of the difficulty you will have in getting a woman to sleep in flannel. But it is very necessary that she should do so. I do not know why it is that women have such an aversion to flannel. Some will say they would rather die of albuminuria than wear flannel. It is probably because it irritates the skin, but I believe that that fact does good. When I say flannel, I do not mean one of those sham substitutes for it which have been invented during modern days. I mean the flannel made of pure wool. You can easily understand that while the kidney is in this condition the balance of function between the kidney and skin should be carefully guarded, lest, upon disturbing the function of the skin, the amount of effete matter circulating in the blood be increased and the patient be thrown into convulsions. I have known patients to die in whom the amount of albumen in the urine previous to undue exposure of the skin showed that by proper care in the way of dress they might be alive to-day.

The skin, then, should be kept warm. The food should be of a nature that will not irritate the kidney, and such as will flush or wash it out. Milk will fulfill these requirements. If the blood be poor, thin, and bad, give the tincture of chloride of iron. If it be possible for the patient to exercise without increasing the amount of albumen in the urine, have her do so. If walking increases the amount of albumen try riding, or if

riding is first tried and produces an increase in the quantity of albumen, then try walking. The question whether the albumen is increased by exercise can only be determined by examination of the urine, perhaps frequently repeated. Then, if the amount of albumen runs up to thirty, forty, or fifty per cent., as the time of viability is reached, I would most strongly advise you to terminate pregnancy, and you will never regret having done so. I believe, however, that with this increase in the amount of albumen, and growing bad symptoms, if you do not terminate pregnancy at this time you will often have occasion to regret it. You can induce labor at the eighth month with comparative safety. Now, what change is going to take place during the last thirty days of pregnancy? The child, which now perhaps weighs three pounds and a half, is going to increase in weight up to seven pounds, and if at the present time the pressure upon the kidneys and the condition of the blood is such as to cause this large amount of albumen in the urine, what will be the state of things when this rapid growth of the child occurs? Convulsions may occur at any time, resulting, perhaps, in death both to mother and child.

Finally, you should place the woman in such relations that she may avoid, as far as possible, the dangers of the albuminuria of pregnancy. As said before, she should be placed in quiet surroundings, advised to sleep plenty, to avoid theatres, churches, and other places where a number of persons are congregated together to vitiate the atmosphere. She should avoid late suppers and overheating at any time; she should eat only easily digested food; she should avoid excitement and exposure to cold. In telling her the necessity for observing these general rules you should not excite in the mind of the pregnant woman undue apprehension, but at the same time she should understand that if she disobeys your instructions you will not be answerable for the results; that if she follows your advice everything will probably come out all right.

COMMUNICATIONS.

ABSCESSES OF THE ABDOMINAL CAVITY.

Paper read before the Dearborn (Indiana) County Medical Society,

BY JOHN ELFERS, M.D.

Abscesses of this cavity, though not of frequent occurrence, yet are common enough to demand the careful study of every practitioner of medicine. When we consider their gradual and insidious mode of development, their great similarity to other diseases, it is not a matter of surprise that the most eminent practitioners and accurate observers have never suspected them at different times until discovered post-mortem.

And no doubt, if in some of the fatal cases of so-called typho-malarial fevers post-mortem examinations were made, it would be found that they were really cases of septicæmia, caused by collections of pus in some of the abdominal organs. An abscess of the liver may form and a portion of the organ become converted into a pus cavity, without any symptoms pointing to that organ.

Many cases follow attacks of dysentery, in others, malarial poisoning is the cause. Calculi and traumatic injuries, and lastly, emboli, may be followed by abscess. The embolus being carried into the liver by the portal circulation, it finally reaches a vessel so small as to arrest its further progress. The symptoms are a sense of weight in the right hypochondriac region; general malaise, attended by fever; coated tongue; bowels generally constipated; urine scant and high colored. If the inflammatory process is near enough to the surface to involve the peritoneum, there may be severe pain, but if this membrane is not involved, there may be no pain at all. Sometimes there is pain in the right scapular region, but this may be caused by disorders of the stomach, as well as the liver. In some cases nausea and vomiting are prominent symptoms. Sometimes there is marked soreness and a sensation of stiffness in the right leg, owing to encroachment of the disease on the psoas muscles and nerves in that locality. This was very marked in a case which came under my observation. Some authors claim that there is no elevation of temperature until after the pus is formed, and that then the fever is the result of septicæmia. In cases where the pus is working its way to the surface, there is generally considerable swelling, and in some cases this is very great. Jaundice is present in about one-third of the cases. This is most marked where there are calculi, or where there is considerable swelling of the mucous membrane of the ductus communis choledochus, thereby preventing the passage of bile into the duodenum, and necessitating its reabsorption into the blood.

I will now briefly give the clinical history of a case which came under my observation. Was called, February 5th, 1880, to see Caroline L., aged thirty-three, married, mother of four children, the youngest five months old. Has enjoyed fair health during the last year, until about one

week previous to my first visit. During this time she has complained of pain in the right side; headache; fever; anorexia; bowels constipated; urine scant and high colored, and stiffness and pain in the right leg.

Present Condition.—A woman of medium size, fairly nourished and dark complexion; heart and lungs apparently normal; firm pressure over the right side causes some pain, and over the centre of the tenth rib is a very sensitive spot about the size of a silver dollar—this was the only sensitive point that could be found; no swelling appreciable; pulse 100; temperature 102° Fahr.; tongue coated with a heavy yellow coat; bowels constipated; the quantity of urine diminished and high colored and well marked jaundice. The secretion of the mammary glands is nearly arrested, so that the child has to be fed, and is not put to the breast at all. Prescribed cathartics and diuretics, to be followed by cinchonidia and ipecac; ordered mustard plaster to be applied to the right side.

Feb. 6th. Somewhat better; has had several fecal evacuations; also free secretion of urine; pulse not so frequent; temperature 101°; considerable soreness of right side, but no swelling; still complains of stiffness of right leg.

Feb. 7th. No change; continued treatment. From this date until the 13th of February there was but little change in the symptoms; fever continued; sometimes morning, at other times evening exacerbations, each exacerbation being followed by or terminating in a profuse sweat. The bowels never moved without laxatives, and it was necessary to prescribe diuretics to stimulate the kidneys to perform their function. The tender spot in the right side had, in the meantime, changed its position, until now it occupied a position half way between the twelfth rib and the crest of the ilium, and two or three inches anterior to the transverse processes of the lumbar vertebræ.

Feb. 13th. Much better; temperature nearly normal; appetite improving, and the secretion of milk has returned, so that now she can nourish her child. There is some soreness in the right side, but it is supposed to be due to the blistering, which had been resorted to several times.

Feb. 14th. But little change.

Feb. 15th. Not so well; complains much of her side; her tongue is getting dry and red; abdomen is becoming tympanitic; bowels constipated; voids no urine; there is some swelling of her right side; does not sleep any during the night.

Feb. 16th. Symptoms same as yesterday.

Feb. 17th. Has been very restless all night; there is considerable swelling of the right side; no movement of bowels nor action of kidneys.

Dr. Barkley, of Farmers' Retreat, was now called in consultation; arrived at 5 P.M., when her temperature was 104°; pulse 140; other symptoms same as this morning. Prescribed a febrifuge for the high fever, to be followed by a mercurial purge, giving 10 grains of calomel for the first dose and three doses of 3 grains each afterward, to be given three hours apart. Applied blister and flaxseed poultice to the tumor, giving morphia to relieve pain.

Feb. 18th. Not much better; there has been no movement of the bowels after taking all the calomel, and has voided no urine; temperature not so high; does not suffer so much pain, but this is owing to the morphia; she has considerable tympanites; ordered some castor oil; continued the other treatment.

Feb. 19th. No change. After Dr. Barkley's arrival an enema was given, after which she had a free evacuation of the bowels, at the same time voiding urine. After the bowels had moved the tympanites disappeared. Does not suffer much pain. Continued the treatment, and in addition gave fid. ext. cascara sagrada, in ʒ doses, but without receiving the desired effect.

February 20th. Little better. Temperature 102, pulse 108. Continued treatment.

February 21st. We saw her at 10 A.M. As our laxatives and diuretics had failed we again resorted to an enema, with good effect. There is considerable tympanites; tongue is dry and red; has been sweating profusely during the night. Temperature 102°, pulse 100. From this time until 26th there was very little change. She had constant elevation of temperature, attended by night sweats; no appetite, with a typhoid condition of the system. The pain in her side would be very severe at times, then at intervals would be absent.

February 25th. We noticed considerable enlargement of the tumor.

February 26th. The enlargement is more marked and deep; fluctuation can be detected. An exploring needle was passed into the tumor about three-fourths of an inch, but without finding any pus. Thinking that further interference was not justifiable we continued the local applications and other treatment, giving as much beef essence and egg-nog as we could induce our patient to take, to sustain her until the pus would be near enough to the surface to be evacuated.

February 27th. No better.

February 28th. Rather failing. Abscess enlarging very rapidly and causing much pain.

February 29th. Has had severe pain in the right side during the night, and is much prostrated. Temperature 102°, pulse 120. On palpating the tumor, deep fluctuation can be detected. After using an ether spray Dr. Barkley made another exploration, and a drop of pus followed the instrument. A free incision was made immediately, when about a pint of laudable pus was discharged, with immediate improvement in the condition of our patient.

March 1st. Much better. Temperature 101°, pulse 108. Has had some pain during the night, but it is supposed to be due to the collection of pus in the cavity, the incision having closed during the night. After reopening the wound a large quantity of pus was again discharged, relieving her very materially. A tent was now introduced, keeping the wound open, thereby preventing the further accumulation of pus.

March 2d. Temperature 98½, pulse 96; is improving. The abscess continued discharging until March 10th, when it ceased; discharging altogether between thirty-five and forty ounces of pus. After the pus was evacuated the temperature never exceeded 99°; pulse ranged from 84 to 96; night sweats ceased; tympanites disappeared; appetite returned, and our patient made a rapid recovery, considering the critical condition she was in but a short time before. The most annoying sequel she complained of was the stiffness of her right leg and a sensation as if it was shorter than the other one, which continued for some time after she was around and attending to her ordinary duties, but finally disappeared altogether. The diagnosis in this case was not clear in the beginning; the only symptom pointing to the liver being the seat of the trouble was the jaundice. It is true there was considerable pain in the epigastric and right hypochondriac region, but that is nearly always present in ordinary remitting fever, of which we had the characteristic symptoms the first two weeks of the disease; but that it was not a malarial or continued fever is proven by the fact that the fever ceased immediately after the pus was evacuated. Doubtless the pus was formed during the first two weeks, and that subsequently the fever was due to septicæmia while the pus was making its way to the surface. The prognosis in these cases should always be guarded. If the abscess opens into the lungs, externally through the skin, or into the intestines, many cases recover; but if it opens into the peritoneal cavity the termination is almost invariably fatal. By the early use of the aspirator many cases may recover that would otherwise prove fatal.

The treatment in these cases should be, first, to limit the inflammatory action; second, palliative; third, to remove the pus at the earliest moment practicable. The first indication may be met by giving large doses of quinia, it being claimed that it has the power to stop the migration of white corpuscles; then to relieve the portal congestion cathartics should be given; those producing the greatest serous transudation with the least irritation possible are the most desirable. The saline purgatives, of which the sulphate of magnesia is generally at hand and very effectual, should be given during the active or inflammatory stage; where this is inadmissible, calomel may be given. All cathartics which have a cholagogue effect should be avoided; of this class aloes, podophyllin, rhei, colocynth, jalap, hold a foremost rank; but this objection cannot be made to calomel, as recent experiments seem to prove that it not only has no power to increase the flow of bile, but that the quantity is actually diminished during its administration. To relieve pain, anodynes must be given freely. Morphia given in small doses and frequently repeated until relief is obtained, is perhaps the best way where the patient is not near enough to the physician's office to afford an opportunity for frequent visits; but where they are near enough to be seen often, giving ordinary doses hypodermically is perhaps the best and most satisfactory. Local applications should be kept up constantly, in the form of poultices and blisters, thereby relieving tension and inviting the pus to the surface. We are taught by some text-books to use the aspirator early, to remove the pus, if any is present, and if not, the puncture will do no harm, but on the contrary, that frequent punctures with the aspirator needle are beneficial. When the tumor points externally we should be careful to satisfy ourselves that there are firm adhesions between the tumor and abdominal walls, then make a free incision, keep a tent in the opening, establish thorough drainage; and where the discharge is offensive and unhealthy, injections of weak solutions of carbolic acid will be beneficial. If, however, the pus is laudable, without any offensive odor, a free outlet is all that is necessary. In addition, keep up our patient's strength with good food and tonics, treating other symptoms as they arise.

Perinephritic Abscess.

By perinephritic abscess is meant inflammation, followed by suppuration of the connective tissue around the kidney. The most frequent causes are contusions, or any traumatic injuries. Some authors claim that a strain may be the

cause. In puerperal cases it may follow pelvic cellulitis, the inflammation extending up to the kidney. Symptoms are the same as in abscesses of other regions; there is generally deep-seated pain, aggravated by pressure; swelling, with discoloration of the skin, though the discoloration may be absent in some cases. It often occurs in persons of broken-down constitutions. Prognosis should be guarded. In subjects previously healthy, where the pus is evacuated externally, recovery is the rule. On the contrary, where the pus burrows into the surrounding structures, and in broken-down subjects, the prognosis is grave. Treatment in robust subjects should be antiphlogistic. The bowels should be thoroughly evacuated. If there is much disturbance of the circulation, arterial sedatives, with anodynes to relieve pain, are indicated. Emollient poultices, with a blister occasionally, are the best local applications. The pus should be evacuated as soon as possible, to prevent its burrowing in the surrounding structures. Purulent collections in the connective tissue around the cæcum are more common than that of the kidney.

Among the causes are external injuries, foreign bodies in the bowel, or the inflammation of ordinary typhlitis extending into the connective tissue. Symptoms are, a sense of weight in the right iliac and lumbar regions, swelling and pain, the pain frequently extending down the thigh. The thigh is flexed upon the abdomen, to relax the psoas muscles and structures of the anterior abdominal wall. The bowels may be constipated, but if there is no typhlitis present there will not necessarily be any interference with the function of the bowel. Sometimes there is nausea and vomiting, with considerable elevation of temperature. In some cases there is considerable depression of the vital powers.

In making our diagnosis we should be careful to distinguish between fecal collections and abscess, since the treatment is quite different. In abscess there is the swelling, severe pain, and constitutional symptoms of abscess. In fecal impaction there is generally no elevation of temperature; there is generally no discoloration of the skin. The collection may resemble a large tumor, be sensitive to pressure, like an abscess, but on making firm pressure some indentation can be made into the fecal mass; but we get no such results in abscess.

The prognosis should be guarded; if the pus evacuates externally the prospect for recovery is fair, but if it opens into the peritoneal cavity the termination is fatal.

Treatment.—Rest, anodynes, given freely, to relieve suffering, and local applications, constitute the treatment in the first stage. If there is no typhlitis a saline cathartic should be given, to evacuate the bowels, but if there is any inflammation of the mucous membrane of the intestine, all purgatives should be avoided. If the constipation is very obstinate, enemas will be beneficial. To remove the pus the aspirator may be used, but it is most desirable to get the pus near the surface; after firm adhesions have formed between the tumor and the abdominal wall, a free incision should be made, to afford a free outlet to the pus and any foreign bodies that may be present. They sometimes are the cause of the suppuration. After an incision is made it should be kept open, to afford free drainage. Then give tonics and plenty of good food, to husband the patient's strength until the danger is past.

THE HYPODERMIC ADMINISTRATION OF CARBOLIC ACID, FOR THE CURE AND REMOVAL OF FOUL AND ILL-CONDITIONED ULCERS, BOTH INTERNALLY AND EXTERNALLY SITUATED, POISONOUS BITES, HÆMORRHOIDS, CARBUNCLES AND TUMORS.

Read before the Texas Medical Association, at its session in the City of Waco, Texas,

BY N. B. KENNEDY, M.D.,

Of Hillsboro, Texas.

Mr. President and Gentlemen—I wish to offer for your consideration, on this occasion, some of the conclusions I have arrived at, during a period of three years, in the administration, hypodermically, of carbolic acid, for the cure and removal of ulcers, poisonous bites, carbuncles and tumors.

Carbolic acid, as you all know, is a solid, obtained from the products of the distillation of coal tar, between a temperature of 300 and 400 degrees. It was discovered by Runge, in 1834, who gave it the name of carboiic acid; but to Dr. Calvert is due the credit of introducing it into general use in the United States and England.

Carbolic acid may be defined to be an antiseptic anæsthetic, with slight caustic properties, and one of the most powerful disinfectants known. It has a very feeble claim to be recognized as an acid, being more closely allied to alcohol than acids, and, in consequence, is sometimes called phenylic alcohol. Carbolic acid has the power of preventing putrefaction in animal substances, arrests fermentation, and coagulates albumen. Carbolic acid in the liquid form is very slightly irritant; and when applied undiluted to the

skin, causes it to turn white, but produces very little pain. In contact with mucous surfaces, it acts in the same manner.

When I commenced, three years ago, experimenting with carbolic acid, hypodermically, it was with a firm belief that I would succeed. The experiments then commenced have ceased to be experiments, but have become established facts. I beg your indulgence while I rehearse to you, in as concise a manner as possible, some of the few out of many successful cases treated hypodermically and locally with carbolic acid.

CASE 1.—Mrs. McC., a delicate little woman, I found suffering with hæmorrhoids, nearly as large as a goose egg. I injected, hypodermically, five or six drops of Calvert's undiluted carbolic acid into the centre of the tumor. The pain was but momentary, the anæsthetic effects of the acid following immediately on withdrawal of the needle. Four more injections effected a complete cure in this case.

CASE 2.—I was called, August 19th, 1878, to see J. R. D., one of our most esteemed citizens, suffering with fifteen large carbuncles on his back and neck. He was suffering fearful agony, his family informing me he had not slept five minutes in five days and nights. I at once injected four or five drops of carbolic acid into each of the carbuncles with the happiest effects. In five minutes the old gentleman was in a sound and refreshing sleep, which continued without intermission from 4 o'clock P.M. until 9 o'clock A.M. He awoke from sleep greatly refreshed and without pain, and never did have any more pain. Twelve of the carbuncles aborted and three went on to suppuration, or rather, had commenced to suppurate, when I first saw them. A complete cure followed in three weeks.

CASE 3.—Was called in the evening to see a boy, ten years old, who had been bitten in the morning by a mountain rattlesnake, in the *dorsum* of the foot. On arrival I found the little fellow suffering terribly, with the foot and leg livid and much swollen. I immediately injected five or six drops of the acid, as near into the bite as I could. The relief from pain was so immediate that the little fellow asked me to let him see the "little thing" that stopped his pain so quick. The swelling rapidly disappeared, and he never suffered another moment's pain.

CASE 4.—J. L. F., a well-to do farmer, consulted me about a tumor on the back of his neck, which had commenced to grow and was paining him. I found a fibro-cellular tumor about the size of a small egg, and injected about twenty drops of undiluted acid into the centre of the tumor, which in this case suppurated, but in a week or ten days had entirely disappeared, and left no cicatrix behind.

CASE 5.—My friend, Dr. Carmichael, of Peoria, Hill Co., Texas, invited me to see Miss J. A., a young lady, eighteen years old, in the full bloom of womanhood and beauty, for my opinion in reference to a very large tumor in her right breast. Her history was good; she had been in good health all her life. Two years since the *catamenia* was established, synchronous with which she noticed a swelling in the right breast. It had been growing for two years, and was now as large as a child's head. She had never suffered any pain in the gland. I diagnosed it to be a multilocular adenoid tumor. I injected about twenty drops of pure, undiluted acid into the most prominent portion of the tumor. The pain was very slight, the anæsthetic effects following immediately the withdrawal of the needle. I used the remedy once a week, from week to week, for two months, at the expiration of which time the tumor had decreased in size from that of a child's head to that of a goose's egg. I now commenced to use the remedy twice a week, and at this writing the tumor is about as large as a hen's egg, and the indications are favorable for its entire eradication. (NOTE.—In a month after this paper was read the tumor had entirely disappeared.)

I also use carbolic acid locally with the happiest effects. I was called to see the Rev. Mr. B's wife, who had been confined to her room and bed for two years, and had had various treatments, both from regular and irregular physicians, with but little benefit. An examination, per vaginam, revealed a carfully ulcerated os and cervix uteri, with an exceedingly offensive discharge and smell from the genitalia. I applied a fifty per cent. solution of the acid to the ulcers three times per week, and directed for her a good alterative tonic; and in three months she was the very picture of health.

A highly nervous young lady came to my residence to have a felon lanced, and was clamorous for chloroform, as she feared the pain would kill her. I bathed her finger in pure, undiluted acid, and lanced the felon almost without pain, much to her astonishment.

In conclusion, then, allow me to advance the opinion that in carbolic acid we have one of the most powerful remedies for good in the whole pharmacopœia, and one at no distant day destined to supersede almost all other medical and surgical procedure. An antiseptic and anæsthetic disinfectant, *facile princeps*, in surgical cases.

Hospital Reports.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

A CLINICAL LECTURE BY WILLIAM GOODELL, M. D.,

Professor of Clinical Gynæcology, in the University of Pennsylvania.

Reported by Wm. H. Morrison, M.D.

Carcinoma of the Neck of the Womb—Removal by Scraping. Remarks upon the Use of the Hot Wire in Removing the Neck of the Womb.

Gentlemen:—I am going to bring before you to-day a case of carcinoma of the neck of the womb; but as the woman is not fully etherized, I will talk until she is ready. What have we in that bowl? It is a hæmostatic. One of the best that you can have, because it is found in every house. It is good vinegar. In operations around the womb it is very useful. I do not know that I should care to use vinegar in a case where I wanted union by the first intention; but where you have bleeding and wish to check it, you should use vinegar. If you inject Monsel's solution into the vagina, its astringency is so great that it contracts the vagina to such an extent that you find great difficulty in your further operations. Suppose you have a hemorrhage from the vagina; you put in a sponge soaked in Monsel's solution, but the bleeding continues. You have to remove the sponge, and you are going to have a hard time to get others in, and unless the woman is under ether, she is not going to permit any examination.

This patient is thirty years old, married, and has had several children. I want to impress one thing on your minds; it is this; that carcinoma of the neck of the womb almost never occurs in a sterile woman. I want you to bear that in mind. Remember, in your diagnosis, that carcinoma of the neck of the womb is exceedingly rare in unmarried women, or rather in women who have never borne children. The inference, therefore, is, that carcinoma of the neck of the womb always occurs at the seat of a laceration of the cervix. On the other hand, when you come to cancer of the body of the womb, sarcoma, spindle and round-celled, cylindrical epithelioma, if you choose, these, which are very rare, usually occur in old maids and married women who have never borne children. I propose to-day to remove this cancer. They sometimes bleed furiously; but if the work is done rapidly it is not so alarming,

I want to call your attention to this woman's complexion. We have here the typical leaden color which is supposed to be pathognomonic of cancer. It is very marked in this case. It is an ashy color. After the operation that will disappear. This color is, I think, due to a sort of slow septicæmia. I do not consider it due to poisoning of the blood from the cancerous debris as such. You must not, however, be misled by the color, for sometimes women with advanced cancerous disease will have a fine, blooming complexion. This is especially true when they retain a fair amount of fat.

I shall now begin and rapidly break up these granulations with my finger. This woman does not know what is the matter, and I have been very careful not to tell her. She asked me the question, "Doctor, after this operation will I be well? Will I ever have to have another operation?" I evaded the question, and said, "I am not a prophet, and cannot possibly tell whether you will need another operation." I cannot bear to say *cancer* to these women, and I would advise you not to do it. The husband of a lady has been to see me twice, to make an appointment for bringing his wife from a distance. She has failed to come each time, because she is afraid that I shall tell her that she has a cancer. I have had women, on a number of occasions, say to me, "Now, Doctor, if I have a cancer, don't tell me." It is quite common for women, when the change of life begins, if they have any pelvic pain or trouble, to imagine that they are going to have a cancer.

The whole anterior neck of this womb is gone, and I have to be very careful not to get into the bladder. I shall now use this instrument. It is a gouge forceps, devised by Dr. Remey, of Cincinnati; the object is to have as little hemorrhage as possible; it is a very good instrument. The points which bleed are right in the cancerous mass, but after this has been removed the bleeding becomes less, and then it comes from the edges of the cervix, where the mucous membrane runs on the outside of the neck. In order to control this hemorrhage I employ pressure forceps, when necessary.

This operation is an exceedingly successful one, as a make-shift. This woman has been losing a great deal of blood; she has had considerable pain, but not the agonizing pain that she will have in the course of a year. In cancer of the neck of the womb pain does not exist to any great extent, unless the disease has passed the internal os. You know, gentlemen, that you can insert tenacula and make applications to the cervix, and elicit very little response, but when the sound gets past the internal os, you then cause pain wherever you impinge. This absence of pain often misleads physicians. I have on several occasions diagnosed cases of carcinoma which the physicians had not so considered because there was no pain. When the disease passes the internal os the sufferings are terrible. There is nothing which equals the suffering of a woman lingering on with the disease involving the uterine cavity. I once knew a woman take by the mouth thirty-five grains of morphine in twenty-four hours, before she obtained any relief.

I have now removed every portion of the cervix, and have a funnel-shaped opening leading up to the internal os. As I have said, the results of this operation are very good. The woman's life will be prolonged. Some patients will die from exhaustion; one patient died from the disease involving the stomach; and others die from involvement of the pelvic organs. I say to these women, "I can promise to do you great good. I have cured some cases of this kind. I feel that I can positively promise you that the operation will stop the bleeding and pain for a long time." Sometimes a woman will say, "Now, Doctor, is this a cancer?" I never reply to that straight up and down. I say some-

thing like this, "You have asked me whether this is a cancer. There are varieties of cancer. If you mean is it a hard cancer, like that which comes in the breast, it is not. It belongs to the cancerous class. It is an epithelioma, of the most curable variety." I often use this word epithelioma, and cover my retreat by the use of a long word. Members of the family often say to me, "Do not tell the patient that she has a cancer, for if you do, she will go right down hill." I have known such cases. As soon as the disease was pronounced a cancer, the woman gave up, passed into a state of melancholy, and soon died.

I am now working up toward the bladder. This cancer will some day open into the bladder, but I do not wish to make the opening. Observe the nature of the blood which flows from the vagina. It is watery, because she has lost so much. That is hydræmia. I shall inject some vinegar, to check the oozing. This is not as powerful a hæmostatic as Monsel's solution, but it is much nicer. It is one that you may use with safety. You see that it blackens the blood, as nitric acid does.

The whole anterior part of the neck is not only gone, but I am directly upon the wall of the bladder, and the connective tissues lying below it. There is a space about the size of a silver dollar, where the womb is entirely gone. I am, therefore, a little cautious in what I do in that direction.

You may say to me, "Here is an operation which does not cure, but is simply going to prolong life; it is dangerous?" It looks like a dangerous operation. I have performed the operation a great many times. I kept the account of about fifty cases. I then stopped tabulating, as the history was always the same; a slight rise of temperature in the evening after the operation and the next day, and then no further trouble. I have never lost a patient from this operation—yes, there was one patient who died from tetanus, but she died so long after the operation that we were not sure that the operation had anything to do with it. I always felt that the tetanus was not due to the operation, but to the disease itself. No inflammation has followed the operation, although in two cases, I opened the peritoneum.

I am now working at the posterior surface, and I am a little afraid of getting into the rectum, for the disease has advanced beyond the vaginal junction.

I shall now apply the cautery (Paquelin's). In a former case I applied this cautery and the patient got perfectly well, or rather it all healed excepting a spot about the size of a ten-cent piece. On a future day I applied nitric acid without doing any good. I then concluded to apply the hot iron, without saying anything to her about it. I did so, but she never winced, although she wondered where the smell of burnt flesh came from, and thought that something must have burned in the kitchen. You can in almost all cases (there are some exceptions, to which I shall allude) pass the hot iron into the cervix without giving as much pain as by the application of nitrate of silver; but, on the other hand, just as we have painful hair (I remember seeing, in my young days, a case of plica polonica), as we have cartilage sensitive, which is usually not so, so we do occasionally meet with a case of sensitive cervix.

You observe that I remove the cautery from the vagina every few minutes. I do that for two reasons. First, because it makes so much smoke inside that I cannot see; and, secondly, because it would heat the speculum and burn the woman if I did not.

As regards secondary hemorrhage. Here is an operation where the hemorrhage at the time is sometimes very alarming; do you ever have secondary hemorrhage? I have never seen it. About ten days ago I operated, and there was one point high up where I could not stop the bleeding. The pressure forceps could not be applied; burning did not stop it. I then applied Monsel's solution and partly tamponed the vagina. She lost about a teacupful of blood after that. I have never had hemorrhage coming on some time after the operation when I operated in this way.

Let me say one word about taking off the neck of the womb. Your books tell you to take off the neck of the womb with the hot wire, in preference to the cold wire, but I have given up the hot wire, for I have had secondary hemorrhage of the most frightful character after its use. Some three or four years ago I made a big blunder. A midwife came to me with a prolapse of the womb and vagina. She was very anxious to have the operation performed; she said that she was only sixty years old. I permitted myself to be deluded. I removed the neck of the womb with the hot wire. On the seventeenth day after the operation she had an exceedingly dangerous secondary hemorrhage. I was sent for, and when I arrived I found that the physician had arrested the hemorrhage by a tampon. I removed everything and again tamponed. On the twenty-first day another hemorrhage occurred, and she died before it could be arrested. After her death the superintendent sent for her friends, and they told us that she had come to the hospital without their knowledge, and that she was eighty years old. There is where I made the mistake; in taking her statement, when she looked much older. All the arteries were found in a state of atheromatous degeneration.

About three years ago, I had the wife of a Southern Senator in the hospital. She had carcinoma of the neck of the womb, and I removed it with the hot wire. On the third day a most frightful hemorrhage took place. They sent for me in a hurry, but the lady would have died, if it had not been for the coolness of Dr. Harte, who stopped it with the red hot iron, and plugged the vagina. I stayed in the house for three nights, and the greater part of three days, but the bleeding did not recur. She died some time afterward, from the original trouble.

I assisted a gentleman in this city in an operation with the hot wire. On the fifth day hemorrhage occurred, and we tamponed her *secundum artem*. Several days afterward bleeding again occurred, and the woman died before we could get to the house. Look out for trouble if you use the red hot wire. As I say, all the text-books recommend its use, but it is so dangerous that I do not advise it.

I do not like to tampon the vagina after this operation, for it keeps all the discharges in the vagina, but if I performed this operation at a private house, I should dip a sponge in vinegar, pass it into this cavity and leave it there for forty-eight hours, because the sponge has meshes and into these meshes will dip the inequalities of the cervix. The cervix is going to contract, and every inequality of the cervix is going to find a corresponding depression in the sponge. If I remove the sponge in the twenty-four hours I am going to tear away some of the surface, and may get hemorrhage. I, therefore, leave it until pus has formed. Suppuration begins in twenty-four hours, and in forty-eight hours has advanced sufficiently to allow the removal of the sponge. If at the expiration of this time I find, when I catch the string fastened to the sponge, that it is not going to come away with ease, I leave it for twelve hours longer. The danger from septicæmia is not very great, for the whole surface has been seared with the hot iron, all the blood vessels and lymphatics have been sealed, and a clot has formed in their mouths.

She will begin to smell very badly after forty-eight hours; the vagina will be syringed several times a day with a carbolic acid solution. After the sponge has been removed, it will be syringed at least twice a day. I shall give her a suppository of one grain of opium when she is taken to the ward. The pain of which she will complain will be due to the pressure of the speculum on the coccyx. I always begin to give quinine after the operation. I try to cinchonize the patient within twenty-four hours, so that she will have buzzing in the ears. I give quinine because, in the first place, it is an antipyretic; secondly, it contracts the womb, so that the area of absorption is diminished; and, thirdly, it is an antiseptic.

These cases are to be undertaken without any delay. Just as soon as you have diagnosed a carcinoma propose the operation.

One word in regard to the diagnosis. I do not think that any student who leaves this University will, when he lays his finger on a carcinoma, ever mistake it for anything else; but he may, perhaps, put his finger on a polypus, or a fibroid tumor projecting from the os, or on a bad laceration, and think that he has a cancer. I thought that it was impossible to blunder about a carcinoma; but last summer I had a bad case of laceration of the cervix, which the woman said was done when a child only five months old was born. The tissues were so everted and there were such friable granulations, that I could not at first decide whether or not it was cancerous. I examined the woman closely, and determined that cancer had not occurred. I then proceeded with the operation, which resulted in a perfect cure.

One diagnostic point is that cancer always has friable vegetations and if it is an excavating cancer (usually they are excavating) you can feel a sharp edge around this cavity filled with friable vegetations. I compare it to the crater of a volcano. When the carcinoma projects into the vagina, you distinguish it from polypus and fibroid tumor by finding that in the latter conditions the tumor projects through the mouth of the womb, and you are able to distinguish the neck of the womb, but in the former, the cancer forms a part of the neck of the womb, and cannot be separated from it.

Editorial Department.

Periscope.

Rheumatic Fever—Death from Pyæmia.

The following interesting case is reported in the London *Medical Times and Gazette*, by Dr. Cockle:—

Ten years ago the patient got wet through, was laid up eight weeks in bed, with severe pains in his knees and shoulders, which pains changed their position to the wrists and ankles later on. The most acute pain was in the left side of the chest; worse on taking a deep breath or coughing. Has never been strong or well since, often having pains in joints; but what troubled him most was the shortness of breath and palpitation on taking any exercise.

On admission the patient complained of pain in the præcordial region; slight pain also in the left knee and ankle, which are a little swollen. Temperature at 6 P. M. 102.6°; pulse 120; respirations 30. Profuse acid perspiration. Heart's action tumultuous; no friction sound or increase in the præcordial dullness. The first sound heard over the left ventricle was unusually abrupt. A murmur was audible over the base. Ordered sodæ salicyl., gr. xx, every three hours till 9 A. M. the next morning; took gr. cxx, when, the temperature having fallen to 98°, it was discontinued. Pulse 160; respirations 40. Mild delirium.

November 8. At 3 P. M. the temperature went up to 102°; pulse 140; respirations 40. Sodæ salicyl., gr. x, every three hours. Delirium very violent; and, after taking three doses of the medicine it was again discontinued, as it seemed to cause the delirium, which continued to increase till 4 A. M., when the patient gradually sank into a comatose state (pulse 160; respirations 40; temperature 103°), and continued so till 7 A. M. on the 10th, when he died. One hour before death his temperature suddenly went up to 106.6°. The heart sounds remained unaltered throughout. While comatose there was no evidence of paralysis. Pupils equal, dilated, did not react to light. Respirations whiffing and shallow.

Autopsy, thirty hours after Death.—On removing the sternum and opening the pericardium, three ounces of clear, straw-colored fluid escaped. There were old and strong adhesions stretching from the pericardium to the heart, chiefly to the anterior aspect of the right ventricle and septum, and a few bands at the apex of the heart and right auricle. No evidence of recent inflammation. Weight, eight ounces. On opening the right ventricle and removing a small, dark clot, the valves and endocardium generally appeared healthy. There was marked bulging of the septum into the cavity of the right ventricle. On opening the left ventricle, the walls were seen to be greatly hypertrophied, and the cavity dilated. No alteration visible in the muscular structure. The aortic valves were very much thickened, but without roughening or abrasion of the edges. At the base of the valves was a small atheromatous abscess, about the size of a split pea, which had obviously burst; some gritty matter could be made to ooze from a rent in its wall. There was a small and similar open ulcer situated just at the base of the anterior aortic valve. The anterior cusp of the mitral valve was very much thickened, and a few small, warty growths were found at the margin. The aorta was speckled over with atheromatous patches for half an inch above the valves. Lungs: Marked hypostatic congestion; old pleuritic adhesions of left lung to pericardium. Small caseous and calcareous masses in both apices. Spleen, soft and friable; structure apparently healthy; weighed 10 ounces. Kidneys weighed six ounces each; some small, white, opaque spots were visible on the surface of both kidneys. The right had one large white patch, a quarter of an inch in diameter, surrounded by a zone of congestion; the section showed it to be an infarct broken down into pus; three other well-marked infarcts in other parts of the same kidney. The spots on the surface were found to be abscesses. Two small abscesses existed in the pyramids. The left kidney contained only one infarct of large size; but there were a great many small abscesses on the surface and in the pyramids. Capsule peeled off easily. The urine contained in the bladder was drawn off and carefully examined, but without showing a trace of albumen. Liver slightly fatty, but not markedly so.

It was decided that death was due to pyæmia, consequent upon the escape of softened atheromatous deposit.

A Bristly Boy.

Dr. H. E. Cauty reports, in the *Lancet*, the following singular case which came under his notice recently:—

The patient, a boy ten years of age, was somewhat imbecile, but well nourished. On removing his clothes, the upper part of the back, both shoulders, and down the outside of both arms, appeared covered with short bristles of a clear, darkish, brown-yellow color, acuminated apices, and very clean. These bristles were, at the edges of the group, gradually shortened from their full length of $\frac{3}{12}$ of an inch, until they joined the skin, which was at the junction raised into polygonal flat disks, finally graduating off to the sound, healthy skin of the hands, chest and back. The feeling communicated to the hand on passing it over the shoulders was exactly similar to that of touching a coarse brush, and the bristles gave way under the touch, resuming an upright position afterward. There were a few pink maculæ over the body, and considerable scaly thickening on and around the patellas. Pulse was quick, with nervousness. Bowels confined. Urine free and healthy. Tongue clean. Appetite good. Sleeps well. The bristles were expelled comedones, containing very few immature hairs and very little sebum, drying up into a horny substance. They were tolerably firmly attached, requiring more force to remove them than to extract a well-rooted hair; and when removed they left a small central depression surrounded by a circle of torn epithelium, which retained them in position. They averaged one hundred to the square inch, and had existed over three months. The boy was ordered mercurial aperient every third night, and to be well rubbed with olive oil and a few drops of carbolic acid. A week afterward all these comedones were softer, and those in process of expulsion much more visible. The bowels were now regular. Ordered three ounces of lard and half an ounce of glycerine, to be followed every morning by the benzine lotion. This treatment was continued for two months, when most of the comedones had disappeared. Some few, remaining partially expelled, had inflamed; and there were also some inflamed punctæ where the comedones had been. The lard and glycerine were continued. Three months subsequently, the boy was brought to the hospital, suffering from herpes. The skin where the first crop of comedones had been was found to be perfectly soft, not showing the least trace of their former existence. But the whole surface of the back, which had escaped before, was now covered with slight polygonal elevations, with a minute central spot, as though a comedone was about to appear, or failing to find an exit, had caused slight swelling. During the progress of this case, a solitary comedone made its appearance on the back, and the time of expulsion, from first to last, was six weeks. There appeared to be some family tendency to abnormal sebaceous secretion, as a brother, aged twenty, had his face, ears and neck, quite black with comedones of the ordinary character. The formation of comedones of an extra horny character is not very rare; but their expulsion and retention on the skin, in such quantities, is very uncommon.

Congenital Absence of Anus and Rectum—Fistulous Connection between Rectum and Vagina.

Dr. R. C. Waters contributes the following case to the St. Louis *Medical and Surgical Journal*. The patient, a healthy-looking infant, five days old, was found to present the following condition. The rectum terminated in a *cul de sac*, and the recto-vaginal fistula was situated about half an inch above the lower portion of this *cul de sac*. The vaginal terminus of this fistula alternately contracted and relaxed after defecation, very similar to the sphincter ani after an ordinary evacuation. The deficiency of the rectum, the space being filled with connective

tissue, was estimated, with the aid of a bent probe, to be about half an inch. It was decided to operate at once. A combined grooved director and aneuerism needle was introduced into the *cul de sac* as a guide. The integument was then divided through the median raphe and the tissues subsequently divided with a bistoury. The guide was easily reached, and introducing a probe-pointed bistoury, the opening was enlarged. There was considerable hemorrhage, and since the vessels could not be seized, Monsel's solution was resorted to, which effectually checked it. A tampon was introduced and the operation completed for the time. The next morning the tampon had been passed, and with it some fecal matter. Efforts to draw down the rectal mucous membrane and attach it to the integumentary margin of the anus were unsuccessful, and owing to the great hemorrhage that had occurred, dissection was not resorted to. It was decided to employ gradual dilatation. A thermometer case was used for the purpose. The patient living twenty-two miles from the doctor, this part of the operation was entrusted to its grandmother. The dilatations were continued daily for two weeks, and everything was progressing nicely, when the mother concluded that it gave the baby too much pain and discontinued them. The artificial channel degenerated into a fistulous canal, which eventually closed entirely, and the fæces passed through their previous channel. During the two weeks of dilatation, and for a month subsequently, the fæces continued to pass through the artificial channel. Erichsen states that unless you bring down the mucous membrane, the operation will fail, on account of fistulous degeneration of the canal. He did not want to use Monsel's solution in this case, on account of its interfering with this bringing down of the mucous membrane, but was compelled to resort to it as the only means of checking what threatened to be dangerous hemorrhage. After the operation the patient suffered from shock, but rallied, and was doing well until the cessation of dilatation, though Dr. Waters imagines that the fistulous degeneration which did occur might possibly have taken place at any time after the cessation of dilatation, when the mucous membrane was not brought down. The patient died a year later, from cholera infantum.

"Alkapton" in Urine.

Dr. George C. Armstrong presented to the Medical Society of the College of Physicians of Dublin (Dublin *Journal of Medical Science*) the following novel case. The specimen of urine was from a little girl, apparently in perfect health, whose mother he had attended three years before, in the worst puerperal convulsions he had ever seen. The mother remarked that the child's urine, although perfectly normal in appearance when first passed, on being allowed to cool assumed a deep color, and stained the child's linen. He sent some of the urine to Professor Tichborne, who had made the following analysis:—

The specific gravity at 60° Fahr. was 1.025. Albumen absent. Acid to test paper, and on standing it gave a slight deposit, consisting of urate of ammonia and a little mucus. The urea was scanty, not sufficient to account for the high gravity—being only one-half per cent. or 5.25 grains per fluid ounce. This urine presented a great peculiarity; it contained a substance which is only met with occasionally, and which has been termed "*alkapton*." Bödeker met with a case, and Lionel Beale records another. It behaves like sugar, reduces copper, and probably may be viewed in a somewhat similar light pathologically. Estimated as a sugar it would give about eight grains to the fluid ounce. The urine was examined for bile reactions, but gave none. Dr. Armstrong put some of the urine into small bottles, and, having hermetically sealed them, left one exposed to light and put the other in a dark place. The latter specimen after six hours was not changed in any way.

The term *alkapton* is, it is presumed, derived from *alkali*, *ἅπτω* (fasten or bind), from its relation to alkalies; but the word conveys no real information, and was given at a time (1861) when the physiological chemistry of the urine was imperfectly understood. From various considerations it was thought probable that the peculiar substance in the urine exhibited belonged to the "aromatic series" of chemical compounds, the physiological relations of which group have been investigated with remarkable success during the past five years. The opportunities for observation of this abnormal condition have been too limited to predicate any doctrines concerning its pathological significance.

Hyoscyamia as a Depressor Motor.

The London *Medical Record* says that Dr. Seguin has recently published some valuable observations on this subject. He has used it in paralysis agitans, and choreiform affections with very striking results. In a case of paralysis agitans of four years' duration, where the patient had been under the care of several eminent specialists, and had received, without benefit, a great deal of treatment, including sedatives, counter-irritants to the spine and hypodermic injections of strychnia, he ordered the following formula:—

℞. Hyoscyamiæ (Merck's cryst.), gr. j
Glycerini,
Aquæ destillatæ, āā ♏c
Acid carbol. pur., gtt. ss. M.

Mix, filter with care, and label "Hyoscyamia solution for hypodermic use, ♏j = $\frac{1}{100}$ grain."

The patient was given an injection of four minims ($\frac{1}{50}$ gr.), and half an hour later all tremor had ceased, the mouth was parched, and the pupils were dilated. An hour after there was great dimness of vision, extreme dryness of the mouth, and slight delirium. Four hours after the injection these symptoms had in a great measure passed away; but the hands were still absolutely quiet, and the tremor only very gradually reappeared during the ensuing two hours. On subsequent days, three or four minims were injected, with invariably the same results. In a week, so much tolerance had been produced that this dose did not produce the disagreeable

symptoms, though it did suspend the tremor for from two to four hours. Digestion was not impaired and no irritation was produced at seat of puncture. After six weeks of this treatment, pills containing $\frac{1}{30}$ of a grain were subtituted for the injection, with equally good effect. Two pills daily gave several hours of absolute freedom from tremor, without any toxic symptoms. A month later the patient became more sensitive to the drug, when the dose was reduced to $\frac{1}{60}$ of a grain in the morning and $\frac{1}{60}$ in the afternoon. The paresis of accommodation varied somewhat from time to time, but was readily corrected by weak convex glasses. The patient was discharged after four months of treatment, greatly benefited. In other cases equally good results were observed, $\frac{1}{30}$ of a grain in the forenoon and again at bedtime, being sufficient to almost arrest the trembling for from one to three hours. In none of the cases, however, was the improvement permanent, for after a few weeks, on omitting the drug, it was observed that the tremor was as before.

In two cases of chronic chorea, hyoscyamia proved most beneficial, but failed to effect a cure in one case, where the patient died suddenly, from uræmic convulsions, while the termination of the other case was not recorded. The therapeutic uses of this drug are summed up as follows:—

1. It is a mydriatic. 2. In small doses, it reduces the cardiac pulsations, and increases arterial tension. It may cause a fall of temperature and may produce a rash. It often gives rise to hallucinations and delirium. 3. In large doses, it increases the pulse rate, produces partial paralysis, and induces sleep. 4. It is indicated in mania, restlessness, delusions of persecution, dementia with agitation and destructiveness, epileptic mania, insomnia, status epilepticus, chorea, paralysis agitans, hysterical spasms, tremor, neuralgia, etc. 5. In mania and allied states, it induces sleep with great certainty. 6. In the status epilepticus, it shortens the attack materially. 7. It is a diuretic. 8. Its curative power is not great, and in most spasmodic diseases it is only a palliative.

Dr. Seguin suggests that, in cases of very acute chorea, where death is threatened by incessant motion, hyoscyamia may prove of benefit by securing muscular relaxation with certainty, thus allowing the patient to rest, and giving time for other remedies to act.

Syphilis Treated by Subcutaneous Injections of Mercury, Peptones, and Ammonia.

We read in the *Concours Médical*, January 14th, 1882, M. Martineau, wishing to make a series of experiments with peptones, and mercury, procured a carefully prepared solution containing—

Bichloride of mercury,	150 grains
Dry peptones,	225 grains
Pure chloride of ammonia,	225 grains.

This he mixed with a variable proportion of water and glycerine, according to the concentration desired. M. Martineau has applied this treatment to a great many patients, having up to the present time administered some thirteen hundred injections. He first gave, every third day, an injection containing $\frac{1}{10}$ of a grain of sublimate; while for the purpose of comparison, another series of patients, were at the same time, and like manner, receiving injections of only $\frac{1}{60}$ of a grain. Meeting with no local symptoms, he next gave these injections every two days, then every day, and finally gave as much as from $\frac{1}{10}$ to $\frac{1}{15}$ of a grain daily. He now uses as high as $\frac{1}{12}$ of a grain without experiencing any trouble, and proposes increasing this dose to $\frac{1}{10}$, or even $\frac{1}{8}$ of a grain, if the preparation continues being well tolerated.

During the course of this treatment no local symptoms have ever been observed, no indurations, nor abscesses; and no salivation has been induced; but care should be had, in giving injection, that it be exactly in the subcutaneous cellular tissue, and the back should be chosen, in preference to any other region, because there the sub-dermic cellular tissue is loose and abundant. In the great majority of cases no pain was produced. Two or three patients experienced a slight burning sensation, which lasted for several hours; while five others only felt some little warmth, which passed off in less than an hour. When pain was produced, it appeared after the first two or three injections, but never continued beyond the fourth. Even when as high as $\frac{1}{15}$ and even $\frac{1}{12}$ of a grain were being given daily, no stomatitis, nor any gastro-intestinal troubles have ever followed. This mercurial solution administered in the form of subcutaneous injections appears to have a more marked and rapid effect on the evolution of syphilitic symptoms than sublimate given by way of the digestive tracts. It will be found of especial value in those serious cases of syphilis where the symptoms are of so threatening a nature that they call for quick and decisive action. This therapeutic process is easily applied, and gives neither pain nor unpleasant symptoms of any kind.

Reviews and Book Notices.

NOTES ON CURRENT MEDICAL LITERATURE.

——Transactions of the American Ophthalmological Society, Seventeenth Annual Meeting, Newport, 1881. An illustrated pamphlet of three hundred and fifty pages. Copies can be procured, upon application to the Secretary of the Society, No. 9 West 35th St., New York.

——Contributions to Orthopædic Surgery, a new system of Surgical Mechanics, by Charles F. Stillman, M.D., comes to us in the form of a reprint from the Transactions of the American Medical Association for 1881.

——Contributions to Orthopædic Surgery, an Aid to the Mechanical Treatment of Weak Ankles and Inverted Feet, by Charles F. Stillman, M.D., of New York, is an illustrated reprint from the *Medical Record*.

——We have received the Sixteenth Annual Report of the Board of Trustees of the Connecticut Hospital for the Insane.

BOOK NOTICES.

A System of Surgery, Theoretical and Practical, in Treatises by Various Authors. Edited by T. Holmes, M.A. Cantab. First American from the Second English Edition. Edited by John H. Packard, A.M., M.D., Surgeon to the Episcopal and St. Joseph's Hospitals, Philadelphia. In three volumes. Volume III, 1059 pp. Philadelphia: Henry C. Lea's Son and Co. 1882.

This makes the second American issue of Holmes' System of Surgery we have recently been called on to notice. A synopsis of this volume will present to the reader its merits in a small space. Part I, including Diphtheria and Croup, has been written by A. W. Barclay, M.D., and revised by J. Solis Cohen, M.D. Diseases of the Larynx, by Arthur E. Durham, Esq., revised by J. Solis Cohen, M.D. Diseases of the Thyroid Gland, by Holmes Coote, Esq., revised by the same. Apnœa, by George Harley, M.D., also revised by J. Solis Cohen, M.D. Part II. Diseases of the Bones, by T. Holmes, Esq., revised by Thomas Markoe, M.D. Excision of Bones and Joints, by the same author, revised by John H. Packard, M.D. Diseases of the Joints, by Athol A. Johnstone, Esq., revised by E. H. Bradford, M.D. Diseases of the Spine, by Alexander Shaw, Esq., revised by E. H. Bradford, M.D. Orthopædic Surgery, by W. J. Little, M.D., revised by Dr. Bradford. Affections of the Muscular System, by T. Tatum, Esq., and J. Lockhart Clarke, Esq., M.D., F.R.S., revised by P. S. Conner, M.D. Part III. Diseases and Injuries of Nerves, by J. Lockhart Clarke, M.D., and C. E. Brown-Sequard, M.D.; Locomotor Ataxy, by J. Lockhart Clarke, M.D.; both revised by Professor Roberts Bartholow. Part IV. Gunshot Wounds, by Thomas Longmore, C.B., F.R.C.S., revised by Hunter McGuire, M.D. Part V. Anæsthetics, by Joseph Lister, Esq., revised by J. C. Reeve, M.D. Amputation, by Joseph Lister, Esq., F.R.S., revised by Charles T. Hunter, M.D., and John H. Packard, M.D. Operations upon the Arteries, and Various Operations, by John H. Packard, M.D. Plastic Surgery, by Holmes Coote, Esq., revised by T. G. Morton, M.D. Minor Surgery, by Thomas Smith, revised by John H. Packard, M.D. Part VI. Diseases of the Breast, by J. Birkett, Esq., revised by Theodore A. McGraw, M.D. Diseases of the Skin, by Arthur Van Harlingen, M.D. On Parasites and the Diseases which they Produce, by G. Buck, Esq., revised by Joseph Leidy, M.D. Venomous Insects and Reptiles, written and revised by the same two gentlemen. Surgical Diseases of Childhood, by T. Holmes, Esq., B. E. Brodhurst, Esq., and Alex. Shaw, Esq., revised by Samuel Ashhurst, M.D. Surgical Diagnosis and Regional Anatomy, by T. Holmes, Esq., revised by John H. Packard. M.D. On Hospitals, by Sir J. Ronald Martin, C.B., F.R.S., revised by Norton Folsom, M.D.

The Study of Trance, Muscle Reading and Allied Nervous Phenomena, in Europe and America, with a letter on the moral character of trance subjects, and a defence of Dr. Charcot. By George M. Beard, A.M., M.D. pp. 40. New York: 1882.

This little brochure is readable and interesting. It is a résumé of the psychology of trance, and contains an account of a contest between the author and Brown, the mind reader. While it possesses no practical value to the busy physician, it will serve to while away an hour or two of leisure.

Transactions of the American Medical Association for 1881. Printed for the Association by Collins, 705 Jayne St., Philadelphia.

This volume of six hundred and eighty-four pages ought to be found in every physician's library. Since it contains the deliberations of the representative body of American physicians, all should be familiar with its contents.

Marriage and Parentage, and the Sanitary and Physiological Laws for the Production of Children of finer health and greater ability. By a physician and sanitarian. pp. 185. New York: M. L. Holbrook & Co., 1882. Philadelphia: E. Claxton & Co.

This is a subject well worthy of much study and thought, but hardly suited to a popular treatise, as the present one is. We regret that the author fails to give his name.

A Treatise on Hygiene and Public Health. In two volumes. pp. 1500. Edited by Albert H. Buck, M.D. New York: William Wood & Co., 1879.

This is an elegant work, that should be possessed by every physician who can afford to buy it. We all now realize how much may be done to prevent disease, and since hygiene teaches us how to make this knowledge available, it becomes the imperative duty of every would-be progressive physician to know something of this science. The work before us is an exhaustive treatise, than which there is no better, and we do most heartily commend it.

THE

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HOW TO CONTRIBUTE TO MEDICAL JOURNALS.

At the last meeting of the International Medical Congress, Dr. Billings, in the course of an address on Medical Literature, enunciated some very valuable rules for medical writers, among which were, "always have something to say, and stop when you have said it." This little sentence contains the embryo of professional writing. We have in this country a class of men who desire, and are ambitious, to see their names in print. It matters not to them whether what they have written tends to benefit mankind or not; if they can only get their article published they are satisfied. Hence, medical journals innumerable have, within the past few years, sprung into existence throughout the country. This is an age of unparalleled progress, and new items of universal professional interest are being daily brought to light. These new points are what the physician desires to know, and from the knowledge of them he derives benefit. By the accumulation of individual clinical experiences do therapeutical measures become established. The science of medicine is not yet a certain science; no absolute laws without exceptions can be laid down. Therefore, it occasionally falls to the lot of every physician in active practice to meet with a case, or some cases, unlike any that have been before reported. Now, then, is his opportunity! If he meets with a strikingly novel case of disease, or if he has some unusual experience with either well-known or new therapeutic measures; or if he meets with some remarkable surgical case; or if he discovers *conclusively* some more potent method of treating any particular diseased condition than that hitherto in use, he will benefit mankind and advance his chosen science by making his observations public through some medical journal. But let him be sure, beyond any possibility of doubt, that he has something *new* to say; let him say it as concisely and briefly as possible, and stop when he has *finished*. Long theoretical dissertations or quotations from text-books are objectionable. If he meets with a case of disease that has run a very unusual course, terminating in death, and that may seem to him very interesting, he ought not to report it, unless he has been able, by post-mortem examination, to verify or falsify his ante-mortem diagnosis. Since without this necessary adjunct the bare narration of the symptoms, hypothetical diagnosis and treatment will leave the reader in as much doubt when he has finished reading as the author was when he commenced writing. Therefore, if you desire to prepare valuable communications for medical journals, you must observe the following rules:—

1. Be positively sure you have something *new* to contribute.
2. Tell it in as few words as possible.
3. Do not plagiarize from text-books.
4. Never report an uncertain case, without a verification or falsification of the diagnosis by a post-mortem examination.
5. Do not send the same communication to half a dozen journals. Select one and send it to no others. If you neglect this rule, your habit will ultimately be found out, and *all* journals will reject your communications.

THE INFLUENCE OF ALCOHOL ON DISEASED CONDITIONS.

A large volume could be written on this subject, but a few words will serve our present purpose, which is to call the attention of physicians to the great influence that the use of alcohol may have on various diseased conditions of the human system. The effects of alcohol have been frequently, and we might say, exhaustively discussed, and as a result, when we distill all the arguments, pro and con, we are forced to believe that, to say the least, alcohol is not of any particular benefit to healthy mankind. There are certain conditions of ill health, it is true, in which it may and does do good, but the weight of evidence is in favor of the doctrine that, in the large majority of cases, it is only productive of harm. We all know that a large majority of men use alcoholic drinks as ordinary beverages, and without themselves realizing how much they drink, many of them will daily consume at least a pint of whisky, who consider themselves, and are generally regarded, as only *moderate drinkers.*

No doubt (we speak from experience) many physicians have had, from time to time, presented to their notice instances of chronic disease in which remedies that ought to produce certain effects have failed to do so, and they wonder and cannot comprehend why this should be so. May it not, in many cases, be due to the counteracting influences of even moderate alcoholic indulgence? For illustration, let us select nasal catarrh. Here we have a congestion of the mucous membrane of the nasal passages. Alcohol has a tendency to produce congestion of all the cranial contents. Suppose you may use all the most approved astringent remedies to contract the dilated vessels and remove this nasal congestion, and at the same time the patient continues to use alcoholic drinks; you will have a hard road to travel; it will be like trying to fill a bucket with a hole in the bottom; your astringent efforts will be overcome by the congesting influence of alcohol.

Again we might instance chronic gastritis (which is often produced by the inordinate use of alcohol); your remedies, though well directed, may fail to afford relief if the patient continues the use of alcohol. We all know, for sure, this much, anyhow, that alcohol is a local irritant, and we know that local irritation means a congestion of the part so irritated; therefore, when alcohol is taken into a congested stomach, you may use all the remedies in the pharmacopœia, yet this irritation and congestion will persist, since it is constantly being produced. We might go on indefinitely, illustrating our argument, but it is unnecessary.

Our purpose has been merely to direct your thoughts into the channel indicated, and to cause you to think that chronic disease may be maintained in many cases by the use of alcohol. When you meet a chronic disease that does not yield to your well selected remedies, and when you are at a loss to account for this failure, inquire into the tippling propensities of your patient. Do not be satisfied when he tells you that he is a "*moderate drinker,*" but peer minutely into his habits, and learn what moderation means in his particular case.

In some, moderation means a pint or two of whisky daily, or forty glasses of beer; while to others four or five ounces of whisky would constitute excess. This is a collateral consideration in the treatment of disease, not to be overlooked, while attention to it will surely aid much the remedial action of drugs.

NOTES AND COMMENTS.

Artificial Anus from Tying the Bowel with the Umbilical Cord.

Dr. Latimer reported the following unique case to the Clinical Society of Maryland, *Maryland Medical Journal.* He was called to see a newborn infant, that had been delivered by a homœopath, who, for some reason, had applied a ligature to the cord three successive times. The last time, some protrusion of the intestine had occurred and this had been included in the ligature. The result was sloughing, and the formation of an artificial anus at the umbilical opening, the lips of which protruded, and from them gas and fecal matter escaped. Five days subsequently he found about six inches of the bowel invaginated in the opening and lying out on the abdomen. It was reduced with difficulty and only after incising the upper part of the aperture. The child died the next day.

The Pre-Cancerous Stage of Cancer.

Mr. Jonathan Hutchinson makes some valuable remarks on this subject in the *British Medical Journal*. He believes that if properly treated in its incipiency there is a very good prospect of curing many cases of cancer. "Too late! Too late!" is the sentence written but too legibly on three fourths of the cases of external cancer concerning which the operating surgeon is consulted. The bitterest reflection of all is, that usually a considerable part of the precious time which has been wasted has been passed under professional observation and illusory treatment. He never loses an opportunity to enforce the doctrine of the local origin of most forms of external or surgical cancer and the paramount importance of early operation. All suspicious sores should be considered syphilitic, and treated internally by iodide of potassium, and locally by caustics, until the diagnosis becomes clear. In most cases of cancer of the penis, lip, tongue, skin, etc., there is a stage, often a long one, during which a condition of chronic inflammation only is present, and upon this the cancerous process becomes engrafted. Phimosis and the consequent balanitis lead to cancer of the penis; the soot-wart becomes cancer of the scrotum; the pipe sore passes into cancer of the lip; and the syphilitic leucoma of the tongue, which has existed in a quiet state for years, at length, in more advanced life, takes on cancerous growth. A general acceptance of the belief that cancer usually has a pre-cancerous stage, and that this *stage* is the one in which operations ought to be performed, would save many hundreds of lives every year. What is a man the worse, if you have cut away a warty sore on his lip, and when you examine sections microscopically you find no nested cells? You have operated in the pre-cancerous stage, and have probably effected a permanent cure of what would soon become an incurable disease. Instead of looking on while the fire smoulders, and waiting till it blazes up, we should stamp it out on the first suspicion. He does not wish to offer any apology for carelessness, but he has not in this matter any fear of it.

Poisoning by Stramonium.

In the *Canada Lancet* Dr. Casey A. Wood reports a case of poisoning in a little girl, five years of age, from eating the seeds and surrounding albuminous pulp of the datura stramonium. She presented the following symptoms. She first complained of great dryness in the throat and burning at the roof of the mouth. Shortly afterwards she became very thirsty, but seemed unable to swallow the water that was offered to her. This was followed by nausea without vomiting; twitching of the muscles of forearm and legs; soon after which she became delirious; followed by unconsciousness and convulsions. Eyes bright and glistening; conjunctivæ red and injected, pupils widely dilated, and insensible to light. She would talk rapidly and incoherently for a time, and then burst out into laughter. The skin of the whole body was dry, felt hot, and was of a deep, bright scarlet color. Temperature normal, pulse small and accelerated. A strong purgative of calomel and rhubarb was administered, followed by a large rectal injection of linseed tea and castor oil. This produced several copious movements. They relieved her, and with the last one she passed three or four half digested stramonium seeds. For six hours she was given, every hour, five grains each of chloral hydrate and bromide of potassium, without any effect. She then received a hypodermic of $\frac{1}{10}$ gr. muriate morphia. Three-quarters of an hour afterwards she fell into a troubled sleep, which lasted all night. The next morning she was still nervous, with a red, flushed face, twitching hands and widely dilated pupils, but perfectly conscious. The nervous and other symptoms passed off during the day, but the mydriasis lasted all that day, the next night and part of the following day, when she seemed as well as ever.

Inoculation for Typhoid Fever.

Dr. T. H. Buckler writes to the Boston *Medical and Surgical Journal*, suggesting the inoculation of children for typhoid fever, as well as for the various tubercular diseases. After discussing and demonstrating the great fatality of typhoid fever, he goes on to say that by introducing the germs of this disease into the system, a simple continued fever might be produced, which would confer immunity from the disease thereafter. He claims to have seen five cases, all in one group, where continued fever was evidently produced by the patients having swallowed the morbid poison of typhoid disease. In all, a mild typhoid fever, of the adynamic type, ran the usual course of twenty-one days. [While this proves nothing more than the fact that five persons exposed to the typhoid poison had mild attacks of the disease, while five others equally exposed might have had fatal seizures, which we all know already, yet this communication suggests investigation as to whether typhoid inoculation or vaccination is a possibility.—Ed.]

Abscess of the Pancreas.

Dr. John Shea reports a case of this rare disease, in the London *Lancet*. The patient, a woman, aged 29 and married, commenced (fifteen months previous to her admission to the hospital) to suffer from pain in the region of the liver, increasing gradually in severity and shooting in character. Appetite poor; urine normal; bowels regular and fæces dark. On admission, great tenderness over gall bladder, and jaundice; lungs and heart normal. Under alkaline treatment, with pills of enonymus and henbane, she recovered rapidly, so that in a week she was able to go out. At the end of another week she was quite well, but very weak. In a few days, however, pain over the gall bladder returned, with nausea and vomiting of dark bilious matter, and jaundice. Sinapisms and effervescing medicine were resorted to. Bowels were moved freely, but she continued to grow worse, and lapsed into unconsciousness. All medication proved fruitless, and she soon died. At the autopsy the liver was found large, pale and soft. Pancreas enlarged and hard, being the seat of an abscess, containing pus. A round worm, seven inches long, was found folded upon itself, lying in and obstructing the pancreatic duct, the larger portion of the worm being in the duodenum. Heart somewhat large and fatty. All other organs fairly normal. This case is interesting, particularly in directing our attention to this organ as the seat of some of those obscure cases of disease for which we find it so difficult to assign a cause. Unfortunately, the diagnostic points of disease of this organ are far from accurate, so that in the majority of cases a post-mortem is the only means of making a positive diagnosis. At the same time it is a fortunate thing that affections of this organ are extremely rare.

Ovariotomy.

In the course of a case of ovariotomy reported in the Boston *Medical and Surgical Journal*, Dr. Walter F. Atlee thus summarizes some of the points necessary for success in this operation, with which he has had so much experience as to entitle his remarks to great consideration. In order to avoid any delay, he gives written directions to the patient to have ready—

"Two basins, a bucket, a tin cup, a small tub, a pitcher of hot water, towels, cotton, or carbolized tow, one and one-half yards of flannel, large pins, a package of patent lint, ice, brandy, a feeding cup (or a glass tube, bent), one ounce of chloroform, eight ounces of ether, bottles of hot water, adhesive plaster and a patent ironing table." The patient must have on a night dress and warm woolen stockings. The day before the operation, a dose of castor oil is to be given, and nothing to eat afterwards, only barley water. On the morning of the operation, an enema of warm water is given. In performing the operation, the patient, having her night dress drawn up above the waist, her feet protected by woolen stockings and her lower limbs covered by a double blanket, is placed upon a patent ironing table, which being just large enough for the patient to lie upon, allows the greatest liberty to the surgeon and his assistants. The table is covered with blankets, to make it comfortable for the patient. The knees and elbows are secured by a roller bandage, so as to prevent struggling. A rubber blanket with a large central opening is then thrown over the patient, the edges of the opening being secured to the abdomen by soap plaster. Ether and chloroform, principally the former, are used to anæsthetize. The patient is now ready for the operation. The carbolic spray is not used, but the raw surface of the pedicle is cauterized with carbolic acid. The sponges are washed in carbolized water. A tablespoonful of brandy is given just before the etherization is commenced. If there is much pain or restlessness after the operation, a pill containing $\frac{1}{8}$ grain valerianate of morphia is given and repeated, if necessary, once or twice on the succeeding day. The diet should consist of milk and beef tea. Dr. Atlee, orders the beef tea to be made as follows: one pound of lean beefsteak is cut up small and soaked in cold water, then gradually brought to a boil and boiled for fifteen minutes, then skimmed, strained, and seasoned.

Grindelia Robusta.

The committee on Therapeutics of the Medical Society of the County of Kings, Brooklyn, N. Y., have just made to the Society a report on this drug, published in full in the journal of the Society for [illegible]ary, 1882, from which we extract the salient points. Nine cases of asthma were reported in which this drug gave marked relief when all other medicines had failed, while ten cases were reported in which it failed to give any relief whatever. During two months, every case of bronchitis, whether acute or chronic, or in phthisical patients, in St. Peter's Hospital, were given the drug, with the result that expectoration, cough and respiration were usually favorably modified, but not in a degree markedly different from the effects of various other treatments. Frequently the medicine would, after a few days, produce headache, and

would have to be suspended, though it was usually well borne by the stomach. The preparation used was Squibb's fluid extract, in doses of from ♏xv to ʒss, and the conc'usions seem to be that this drug does not possess any therapeutic value in asthma, superior to that of the drugs in ordinary use.

Smallpox Pustulation in the Fœtus in Utero.

Dr. Richard H. Day, of Louisiana, makes the following remarks on this subject in the *Maryland Medical Journal:* He reports a case that came under his observation many years ago. A number of cases of smallpox occurred among a colony of slaves, some mild and others confluent; among the latter was a colored woman, some thirty years of age, who was near the end of gestation. She gave birth to her child some ten or twelve days after the eruptive stage of the disease, and within from two to three weeks of her full term. The fœtus was evidently living up to within a short time of its birth, as the mother had felt its motions distinctly within a few hours of its delivery; and when born there was no appearance whatever to throw discredit upon the mother's statement; but the spectacle presented was a sickening one. A fœtus covered with a full and distinct crop of smallpox pustules, from head to foot, some of them already ruptured, and the excavations filled with pus, and many still unruptured, so characteristic as to mark the true nature of the eruption at first sight. The mother recovered.

Carbolic Acid in Diphtheria.

Dr. Z. T. Magill, of Lincoln, Mo., contributes to the Chicago *Medical Journal and Examiner*, January, 1882, the following method of treating diphtheria, from which he has secured better results than from any other. He uses an ordinary hose, from three to five feet long and about one inch in diameter. One end is placed over the spout of a common tea kettle, into which has been put half a gallon of water and half an ounce of carbolic acid. The kettle is then placed on the stove, over a good fire, and when the water reaches the boiling point, the free end of the hose is carried under a blanket thrown over the patient's head. The room must be closed. In a short time the patient will perspire freely. If persevered in at short intervals, breathing becomes softer, and presently, after a succession of quick expulsive efforts, the patient throws off a coat or tube of false membrane. The acid vapor seems to prevent the re-formation of exudation. Alcohol and sulphate of quinine are used in conjunction with the acid, for their supporting properties.

Sulphide of Carbon and Iodoform in Phagedænic Ulceration.

From the *Revue Médicale* we note that Dr. J. Chéron, at the Hospital of Saint Lazare, employs the following solution: Sulphide of carbon, 30 parts; iodoform, 5 parts. Iodoform dissolves readily in carbon sulphide, and the rival odors are mutually weakened by association. The pain is less severe than when the sulphide of carbon alone is applied, and it ceases as soon as the liquid has evaporated. It is best applied with a glass brush. Dr. Chéron has seen cicatrization speedily result in cases which had proved rebellious to all the usual treatments.

Nits in the Hair.

From the London *Lancet* we note the two following methods of removing nits from the hair:

1. Apply spirits of wine freely, so as to dissolve the glue which attaches the nits to the hair, and then wash them away with soap and water.

2. Apply to the hair rather a strong decoction of larkspur seeds (Delphinium staphisagria). This will kill the parasites very quickly. Wash the head with carbolic soap, after two or three days. The nits will then readily come away by brushing and combing.

Iodoform in Orchitis.

The following formula is recommended in orchitis by the *Union Méd.* Iodoform four and vaseline thirty parts. Frictions are to be made with this on the painful testicle in orchitis and neuralgia of the cord, supporting the organ by a suspensory. If mercurial ointment has been previously used, it must be carefully washed off, lest the iodide of mercury, which is a caustic, might be formed.

Pulmonary Gangrene and Death Caused by a Panicle of Grass.

Dr. J. Magrath reports in the *Lancet* the case of a boy of seven who swallowed a panicle of grass. He died twelve weeks subsequently, after much suffering. At the autopsy, it was discovered that one-third of the lower lobe of the right lung was gangrenous; the gangrenous mass was riddled with cavities, in one of which lay the head of grass, blackened, but scarcely altered in consistence. The bodies of two of the dorsal vertebræ were excavated and carious.

Removal of the Whole Uterus, for Cancer.

Sir William Mac Cormac (London *Lancet*) recently removed the entire uterus, for cancer. A cancerous mass involving the cervix uteri, together with a tumor pressing on the rectum, were discovered. Upon abdominal section, the pelvis was found blocked by a tense, fleshy, everywhere adherent cyst, which compressed the rectum against the sacrum and completely concealed the uterus and its appendages. The cyst, which was probably ovarian, contained very offensive pus. The cyst, uterus and ovaries were removed. The vagina was not stitched up. A large double-barreled T-shaped drainage tube was inserted, the end projecting from the vagina, and left in the abdominal cavity; it was used frequently for irrigation. Five days after the operation there was some evidence of suppuration opposite the lower extremity of the abdominal incision. The already adherent edges of the wound were separated, some pus escaped, and the cavity was washed out daily. There was no general peritonitis, and ten days after the operation a speedy convalescence seemed sure. [In connection with this case, the following will possess interest. Some years ago, Dr. Walter F. Atlee operated upon a fibroid tumor of the fundus of the uterus. The tumor weighed seven pounds; an ordinary ovariotomy clamp was placed on the vagina, and the whole uterus and ovaries removed. The woman made a rapid recovery, without any untoward symptoms, and in less than three weeks was able to get up and make her own bed.—Ed.]

What is "Bright's Disease?"

Under this heading the London *Medical Times and Gazette* makes the following pertinent remarks: It is, we believe, currently reported and generally believed that an old fogy of the name of Bright, who was connected with Guy's Hospital some years ago, asserted that he had seen a number of patients, all having dropsy, with albumen in their urine, while after death their kidneys were commonly found to be diseased. These symptoms and conditions he grouped together, and to them certain individuals still more silly than himself gave the name of "Bright's disease." But it is evident that this Dr. Bright had no gift of imagination, for he actually worked long and hard before he came to the trifling conclusions above referred to; beyond all, he could never invent his facts, nor had he the gift of twisting them about so as to prove anything. In short, he was what Americans would call a "very or'nary cuss" after all. But see what has been done since his day! Why, his disease, though it is by the weak-minded still supposed to kill a large proportion of our fellow-mortals, has actually been improved off the face of the earth! First, it was found that the same condition of kidney would sometimes give rise to dropsy, and sometimes not; especially this was noted—that in the same individual dropsy might exist at one time, and not at another; so the dropsy was dropped as one of the necessary symptoms. Then it was found that albumen was not always plentiful in the urine; yes, that it was sometimes absent altogether; so the albuminuria has been got rid of as an essential feature in Bright's disease. Only one thing more remained, and that was the kidney disease, which has now apparently gone the way of all the rest; so that we now have the pleasure of contemplating a disease which no longer possesses any one of the characters by which it was originally distinguished. These are great achievements, doubtless; but destruction comes naturally to mankind. Look at the new theories constructed! Some of the wicked ones, we fear, would, with regard to these, say that the zeal which comes not of knowledge might be better employed even in coining words than in building hypothesis on hypothesis—a kind of tower which has little chance of reaching to the heavens, or, indeed, attaining to any greater height than other fungoid growths similar to itself.

The Sensation of Thirst.

Professor Nothnagel contributed a very interesting and instructive article to a recent number of *Virchow's Archiv*, upon which the London *Lancet* comments, and from which we extract the salient points. It is well known that the sensation of thirst expresses an insufficiency in the amount of water in the organism. But why is thirst referred to the mouth and throat? The scanty experimental researches on the subject teach but little. He relates a remarkable case, which throws some light on the question. A man was kicked in the abdomen by a horse, and knocked down, striking the occiput against the hard ground. He was not stunned, but could not walk, on account of the severe pain in the abdomen and back of the head and neck. Previously well, immediately after the accident he began to feel extreme thirst, and in the next three hours drank five pints of liquid. No injury to bone could be detected, temperature was normal, and pupils small. The local pain soon passed away, but the thirst continued. The

thirst was unabated during the three weeks the patient was under observation. It was uninfluenced by treatment, and became more intense every day about noon. Nothing but large quantities of water relieved it, the amount taken daily varying from one to four gallons. The quantity of urine secreted daily was about three-fourths the amount of water taken, and its specific gravity varied from 1.002 to 1.010. The skin was moist. Nothnagel believed that the thirst must have been due to a central effect of the blow on the occiput. The probabilities, he thought, are that the thirst centre is located in the pons or medulla; though this is only speculation, since there were no symptoms sufficiently distinctive to accurately locate it.

Recurring Lethargy.

The *Lancet* records an interesting case that has been under observation at the Hospice-Général, Rouen. For twenty days a woman, thirty-seven years old, has been in a profound sleep, which is broken every night for a few minutes, when she takes food. The sleep is accompanied by general rigidity. Her first attack was fourteen years ago, and periods of lethargy have since recurred from time to time. During the intervals she seems perfectly well. The onset is always sudden; she goes to sleep in a moment, no matter what she may be doing. Just before the onset she becomes nervous and taciturn. During her sleep the face is well colored and warm, and respiration is regular. About half-past ten o'clock each night the legs begin to tremble, slight groans are uttered, and at eleven she opens her eyes, sits up and eats what is given her, without speaking. She immediately goes to sleep again (the muscular rigidity, however, not reappearing until about four in the morning), and so remains until the next night. On two occasions she has slept for ninety-six hours, without food. She does not lose flesh.

Vomiting of Pregnancy.

At a recent meeting of the Obstetrical Society of Boston (Boston *Medical and Surgical Journal*), this interesting subject was under discussion. Dr. Fifield said that for years he had succeeded in controlling the vomiting of pregnancy, either with bromide of potassium or rectal injections of one-half drachm of chloral hydrate. But recently he had a case under observation in which these measures, as well as others tried, utterly failed to give relief; the trouble growing daily worse, until the woman vomited blood. He then introduced Sims' speculum, drew down the cervix, which was found a little excoriated, and covered it thoroughly with nitrate of silver. Bromide of potassium was then given in ten grain doses every two hours. The next day the patient was well. It was the sense of the Society that the vomiting of pregnancy is due to reflex action.

Hygiene and Public Education.

The *Sanitary Engineer*, commenting on the public school reform of France, by which each department is to have a commission composed of six persons, among whom will be found an architect, a teacher, and an engineer, to whom all plans for school buildings must be referred, says, "It is curious to observe how completely sanitation is ignored in this order." [It is singular that an intelligent nation like France should so neglect this matter of prime importance in the education of her children. This foolish method of training the mind, at the expense of the body, in the light of our present hygienic knowledge, can only be denounced as criminal on the part of legislators, and it really behooves parents to take a hand in the matter, and force sanitary legislation for the welfare of their school children. Let us take an active part in agitating such reform in our own country.—Ed.]

Oral Surgery.

At a recent meeting of the Midland Medical Society, Mr. Bennett May showed a male patient, aged forty years (with specimen), from whom he had three weeks previously removed the tongue, part of the lower jaw, and floor of the mouth in one piece, for epithelioma, some enlarged lymphatics under the jaw being removed at the same time. The patient had made an excellent recovery.

"Our Continent."

Of recent ventures in the field of general literary journalism none has attracted so much attention as "Our Continent." It has made its appearance with little blowing of trumpets, but with an imposing array, not of the names merely, but of the productions of the best writers in America and England. The position it takes is with illustrated weekly journals, but it does not make the reading matter subordinate and inferior to a lot of wood cuts and process engravings. On the contrary, it uses engravings to develop and increase the interest in the reading matter. While in the first instance literary, and hence well supplied with poetry and stories, it is eminently attractive

to the family circle by its admirable departments devoted to housekeeping, social customs, dress, home horticulture, etc., etc. Popular science is also well cared for, and articles on history, biography, etc., are prominent features. Its price is $4.00 a year, and as a family paper it has no superior in our language. For specimen copies, which are mailed free, address "Our Continent, Chestnut and Eleventh streets, Philadelphia."

Special Reports.

NO. III.—INFECTIOUS DISEASES (Continued.)

Diphtheria.

Although we recently presented a special report on Diphtheria, we have so much more of interest that a second one will not be superfluous. We have received from the National Board of Health a supplement to their regular bulletin, containing the report of Prof H. C. Wood and Dr. H. F. Formad on the nature of the diphtheritic contagium, and since their labors have been productive of good results, a résumé of their experiments will be given. Their studies were made from a double point of view, namely, clinical and experimental. The bacteria that are present in diphtheritic membrane are identical in form and size with those which are present in the membrane of a non-diphtheritic trachitis, and in the exudation of an inflamed tonsil. They do not hesitate to affirm that it is not possible to determine, even with the highest powers of the microscope, whether an individual micrococci colony, or a mass of such colonies, have come from the surface of a furred tongue, or from an ordinary case of simple throat inflammation, or from one of a diphtheritic character.

A second question, no less important than that just discussed is, are bacteria always present in diphtheria, or only in some cases? In attempting to answer this question, they examined a very large number of cases. In seven cases of what they term "*endemic mild diphtheria*," observed in Philadelphia, the blood was examined *during life*, and in six cases no fungi were found, while in one case micrococci were somewhat abundant in the vital fluid. At Ludington, Michigan, out of fourteen cases of the *severe epidemic* form of the disease, micrococci were found in seven cases, while in the remaining seven they were absent. The cases in which there were no micrococci were all of them very light, or in the stage of convalescence, and the amount of the fungi present in the malignant cases seemed to be proportionate to the severity of the symptoms, and to steadily progress with the disease in the fatal cases. Therefore, they formulate, as established, the proposition that in *endemic mild diphtheria micrococci are always present in the part locally diseased, but are usually not present during life in the blood or in the glandular organs, even in cases which may prove fatal; that in malignant epidemic diphtheria, micrococci are always present in the part locally diseased, and are also usually, and, perhaps, always to be found in the blood and tissues of severe cases, but are frequently, if not usually, absent from the blood of mild cases.* It is very important to know whether the lymphatics and the blood-making organs are the primary seats of infection or not. They are unable to present clinical evidence on this point, but desire to call the attention of investigators to the matter, and state that in animals they found the spleen and bone marrow especially attacked by the fungus. They cannot conclusively state whether or not micrococci are found in the blood in other diseases besides diphtheria, though they incline to the negative view, since, after making a large number of examinations of blood from persons suffering with various diseases, they were only found in three cases other than diphtheria, and all three cases died, two from scarlet fever, and one in childbed, and suffered from sore throat, that Professor Wagner describes under the name of scarlatinal diphtheritis.

MORPHOLOGY.

Great difficulty is sometimes experienced in distinguishing bacteria from other minute organic and inorganic particles. Certain mycelial threads and vibrios, coagulated fibrin, and protoplasmic and fat molecules, often closely resemble micrococci. In zooglea forms the micrococci can at once be distinguished by an experienced eye, as the micrococci of an individual zooglea mass are always uniformly of one size, and are always at the same distance from one another, in contradistinction to albuminous and fat molecules, which vary in size and are at varying distances from each other. Isolated micrococci may vary in size. Micrococci may arrange themselves in pairs and chains; non-living molecules or granules cannot. Micrococci are not soluble in strong acids and alkalies, nor in alcohol and ether, as are fat and most other molecules. Micrococci take the staining well, particularly with hæmotoxylin and aniline dyes, and the aniline dye cannot be so easily washed out as in the case of animal tissues. Beautiful preparations may be made by simply treating sections with a mixture of glycerin and acetic acid, the micrococci be-

coming yellowish brown and prominent amid the perfectly translucent structures. Tincture of iodine is an excellent staining fluid for bacteria within tissues. If first treated with a solution of caustic potash, iodine stains the micrococci deep yellow, while the rest of the tissue is only slightly tinged. The most important distinguishing point between micrococci on one hand and organic and inorganic particles on the other hand is obtained by culture. Micrococci will always multiply, though sometimes much more rapidly than others. They elongate, divide, form chains or zooglea masses if brought into a suitable culture medium.

If the above-mentioned distinctive points are observed, mistakes in recognizing micrococci and other bacteria are entirely out of the question.

In regard to the question of magnifying powers used in recognition of micrococci they affirm (contrary to statements of some other investigators) that a good one-fifth objective is sufficient for the detection of the diphtheritic micrococci, particularly when appropriate staining is used. They saw no micrococci with a magnifying power of 1500 which they could not detect with an amplification of 500 diameters. For the finer morphological details of micrococci a high magnifying power is required, and they habitually used a one-twelfth Zeiss Homog-Immerson.

They also state that as the result of much experience they are positive that the excessive precautions often insisted upon by authors as necessary in looking for micrococci in the blood, etc., are not, in fact, necessary. Micrococci do not exist in the air to any extent, and exposure of blood slides for a few minutes to the air never is followed by the appearance of micrococci when none have previously existed. This is not true of moving bacteria, which in their early growth they have in some of their former researches mistaken for micrococci, and which may appear rapidly in exposed blood.

A description is then furnished of the methods employed for the artificial cultivation of micrococci, which were used for experimental investigation on animals. In one series of experiments twenty-five cultures were made and all the mentioned culture fluids were tried in this series up to a fourth generation.

The general results of the culture experiment were similar to those of the first series up to the second generation. In the third generation the micrococci already began to fail in growth and multiplication, and the fourth generation yielded a still poorer crop. The cultures were occasionally impure—the rod bacteria supervened.

The regulation of the temperature was sometimes defective during the experimentation with this series, on account of imperfect working of the mechanism of the incubator. Sometimes the temperature fell down to 20° during the night, and it was frequently observed that rod bacteria promptly made their appearance in large numbers during such intervals, and spoiled the cultures. The same occurred with clean cultures when heat was suspended purposely for several days. Those culture tubes, however, which were subjected to a uniform temperature of not below 37° C. did not show any invasion of rod bacteria, and the growth of micrococci continued in the manner described.

The careful measurement of the micrococci in this series, which was best accomplished by measuring the chains of micrococci, revealed a size of $\frac{1}{14000}$ to $\frac{1}{12000}$ of an inch in diameter, the latter size relating more to micrococci in zooglea form. The torula chains were usually made up of the smallest micrococci, approaching in this respect to those of the micrococci balls which they have proven to be formed by the invasion of leucocytes by micrococci.

Some of the experiments performed seem to warrant the deduction that inoculation with materials taken from patients suffering from the endemic mild diphtheria of Philadelphia, frequently produces a secondary or indirect tuberculosis in the rabbit, but very rarely, if ever, causes any disease in the rabbits comparable to diphtheria in man, or even any septic disorder; of course, the experiments do not prove that malignant cases of diphtheria may not occur in Philadelphia and have different relations to inoculation.

The Ludington diphtheritic matter acted as a very deadly poison upon the animals inoculated with it. In three rabbits, portions of the membrane were placed in the trachea, with uniformly fatal results. In three rabbits, membrane placed under the skin or in the muscles acted as promptly as did that inserted in the trachea. The experiments in which the inoculation of membrane had no effect were those in which the poison was placed upon an open surface, where it was liable to be washed off. Such were experiments where the vagina and mouth were selected. In one experiment the membrane was more or less imperfectly retained in position by sewing the eyelid over it, and the result was somewhat doubtful.

In two instances, instead of using membrane, they employed minute pieces of kidney for inoculation, and with precisely the same effect, namely, rapid death, with characteristic lesions.

Injections of minute quantities of blood and saliva into the veins gave, however, entirely negative results, with one very doubtful exception.

It will be seen that the effects produced were entirely different from those which were obtained previously with Philadelphia matter. The results of the two series of experiments may be summed up in a few words, as in the following proposition: *While inoculation of the rabbit with false membrane from endemic or ordinary Philadelphia diphtheria is rarely followed by rapid systemic infection, the placing of material from cases of malignant epidemic diphtheria in the trachea or under the skin is usually fatal; the characteristic post-mortem lesions consisting in the presence of micrococci in the blood, and sometimes also in the internal organs, along with severe inflammation at the point of injury, where there is produced an exudation resembling diphtheritic membrane, and crowded with micrococci.*

With these observations and experiments before us, the question now presents itself, what are the relations of the micrococci which exist in diphtheria to the disease? Are they the poison of the disease? or, in other words, are they capable of producing it? The absolute, final answer to this question can only be made by producing disease in the animal by micrococci isolated from the remainder of the diphtheritic poison. The difficulties to be overcome in such an attempt are very apparent. Still, great as they are, they must be overcome before we can hope to possess any absolutely accurate knowledge of the causative power of the micrococci; before we can determine whether they are the active agents in producing the disease.

It is certain that they produce diphtheritic septicæmia with second generation's culture, and they believe that future research will confirm this, and show that *micrococci cause diphtheria by their power of forcing their way into the tissues and by their own excessive vitality overcoming the vitality of those tissues, changing their nutritive processes, destroying them, and finally getting into the blood itself, destroying its white corpuscles and obstructing the circulation.* While this is their opinion, they do not think that at present it can be considered positively proven that the micrococci themselves are the essential poison, and not simply the carriers of the poison.

Their experiments demonstrated conclusively that after a time the membrane, even if kept perfectly dry, will lose its contagious power.

In finally considering the nature of diphtheria, the facts which have been established should be carefully thought over. They may be stated as follows:—

The micrococci of diphtheria do not differ, so far as observed, from the micrococci of furred tongue, etc., except in their tendency to grow in culture fluids.

The micrococci of furred tongue, or ordinary sore throat, have a less tendency to grow under culture than have the micrococci of endemic non-malignant diphtheria.

The micrococci of endemic or non-malignant diphtheria have a much less tendency to grow under culture than have the micrococci of malignant diphtheria.

The rapidity of growth of the micrococci is in direct proportion to the malignancy of the case yielding them, and its contagiousness.

On exposure to the air diphtheritic membrane of the most virulent type loses its contagious power, and the micrococci *pari passu* lose their power of growing in culture fluids.

Under successive generations of artificial culture, the diphtheritic micrococci lose their growth activity, and also their power of infecting the rabbit.

It has not been experimentally directly proven, but it is a necessary inference from the two facts just stated, that under certain favoring circumstances the sluggish micrococcus puts on growth activity, and, in all probability, *poisonous properties.*

Every grade of case can be found in man, from an ordinary sore throat, through simple pseudo-membranous angina and trachitis, up to malignant diphtheria.

Any inflammation of the trachea of sufficient intensity may cause the formation of a pseudo-membrane.

A case may begin as one of sthenic "pseudo-membranous croup," and end as one of adynamic "diphtheria," with blood poisoning; and in cases of this character not infrequently no exposure to contagion is discoverable, and there is clinically every reason to believe that the blood poison has been developed within the body of the patient. The theory of the disease which they would deduce from these facts is, that the micrococcus which directly or indirectly causes the diphtheria is not a specific organism, different from that common to healthy and inflamed throats, but is an active state of that organism; that certain circumstances outside of the human body are capable of throwing this common micrococcus into this condition of active growth

and engendering an epidemic of diphtheria. When diphtheria is thus epidemic the micrococci light upon a throat, and if the throat have little resisting power, as in the child, inflame it, or increase a catarrh already existing into a violent inflammation, and also rapidly enter the blood and cause systemic poisoning.

On the other hand, a catarrh in a weakly subject may, in the beginning, be simply an inflammation from cold, but the ordinary micrococci in the throat, or mouth, favored by the special conditions, etc., may gradually change from the dormant to the active state, and by and by act upon the throat, and at last force their way into the system, and a self-generated diphtheria be formed out of a "cold."

The essential points of these very valuable investigations have now been concisely stated. Any one who may desire to read the whole report, will find it in full, in the "Supplement to the *National Board of Health Bulletin*," of January 21st, 1882.

CORRESPONDENCE.

Adherent Placenta—Death from Septicæmia.

ED. MED. AND SURG. REPORTER:—

On December 15th, 1879, I was called to attend to Mrs. G. in a case of obstetrics. When I arrived the child was born. In due time I attempted to remove the placenta, as considerable contraction of the uterus was evident, and found it attached, and also hour-glass contraction of the uterus. When I got my hand through the contraction I found the placenta attached, and commenced, with the ends of my fingers, to separate it; the patient struggled and screamed so that I desisted for a short time. My patient began to faint, from loss of blood. In a short time, as I had not removed my hand, I separated the placenta, and removed the whole of it at once;* gave my patient 15 drops fl. ex. ergot, and with application of cold and frictions over the abdomen the hemorrhage was soon checked. In a few days after she took cold and remitting fever, but recovered in a few days.

On the 30th of December, 1881, she again sent for me. When I arrived she was in active labor. Upon examination I found a hip presentation. In perhaps half an hour the child was delivered, to all appearance, dead. As usual in such cases, I put a handkerchief over its mouth and commenced artificial respiration, by filling the lungs with my breath and with slight pressure upon its chest. This I kept up for ten or fifteen minutes when it made attempts to breathe and soon succeeded. Suspecting attachment of the placenta and hour-glass contraction, I attempted to remove the placenta by introducing my right hand into the uterus. I found the same state of things that I did two years before. As soon as I commenced to separate the placenta she put her heels against my arm and gave such a push that I had to let go of the placenta or I would have inverted the uterus, but the cord which I had wrapped around my finger of the other hand was torn off, broken. I then attempted to put her under the influence of ether, but she resisted and pushed my hand away, until I gave that up. After, perhaps, half an hour, she consented to let me again attempt to remove the placenta.

Having fixed myself in such a position that she could not push me back, I made another attempt, and just as I commenced again to separate the placenta, she put her heels up against me and commenced to push me away; but as she could not do that, she screamed at the top of her voice that I was killing her, and my assistant let go of her, and she slid to the head of the bed at the opposite side, so that I had to let go or invert the uterus. I then told her husband to send for another physician, which he did; and in about two or three hours Dr. B. came, and after making a statement of the case to him, it was agreed that I should anæsthetize her, and he should remove the placenta; but, as before, she could not be etherized. Dr. B. then attempted to remove the placenta by piecemeal, but she treated him as she did me: Put her heels against him and forcibly kicked him away, upon which he said there was no use in trying to do anything for her unless she kept quiet. The priest was then sent for, and after attending to her spiritual affairs, she agreed to be put under the influence of chloroform: but after a few inhalations she commenced her struggling again, pushing away my hand and screaming that we were smothering her, and would have thrown herself on the floor if I had not caught her. I then said that they would have to hold her until I would chloroform her; but as her husband and parents seemed to hesitate, and as they let go of her every time when she would commence to struggle, Dr. B. said we had no right to force her, as she was a reasonable being; she had a right to have her own way; in which her parents seemed to acquiesce. Dr. B. and the priest then went home, and I remained with her till morning, when I made another examination. The parts seemed favorably disposed, but she had a bloody, serous discharge, of a very offensive character, after having had a chill a few hours before. She could not be persuaded, and utterly refused to let any more attempts be made, either to be put under the influence of chloroform or let another attempt be made to remove the placenta. She said she would rather die than to suffer every time in having the after birth removed, when she was confined. I told her I would not stay any longer, as there was no use of my staying when I was hindered from doing the only thing that would save her. Dr. W. afterward saw her twice, I believe; but she died of septicæmia on the 2d of January.

The first time this unfortunate woman was confined she had an irregular, who, when he found attachment of placenta, said he would not shoulder the responsibility alone. Dr. Walker, of this place, was sent for. The Eclectic held her and Dr. Walker got most of the placenta re-

* See my article in the REPORTER, January 5th, 1870, on attached placenta.

moved by piecemeal, at last. She recovered after having been confined five or six weeks.

E. A. OPPELT, M.D.

Loogoote, Ind., Jan. 22, 1882.

NEWS AND MISCELLANY.

Longevity.

The obituary column of the London *Times*, Jan. 24th contained some remarkable illustrations of prolonged existence, in eight persons, viz., five gentlemen and three ladies, whose united ages amounted to 685 years, giving an average of 85 years and 7 months to each. The oldest, as usual, was a lady, who had reached the great age of 93, the youngest of the same sex being 83 years of age; of the gentlemen, the oldest was 90, and the youngest 81 years of age. The same obituary recorded the deaths of ten septuagenarians, averaging 76 years and 1 month each. That a single day's obituary should record the deaths of so many as eighteen persons averaging the patriarchal age of 80 years and 4 months, is most remarkable.

American Illiteracy from an English Source.

The London *Medical Times and Gazette* says: A summary of an official table has been published, giving the statistics of illiteracy in the United States, from which it appears that in New York the percentage of the total population who cannot read is 3.28, in Pennsylvania 3.41, in Connecticut 3.37, in Massachusetts 4.24, in New Hampshire 3.45, in Vermont 3.91, in Rhode Island 6.31; while the figures for Maine are only 2.80. The unfavorable percentage shown in Massachusetts and Rhode Island is stated to be caused by their factory system and the importation of cheap labor from Canada and other parts of the world.

Vaccination Notes.

The Pennsylvania Railroad requires a certificate of vaccination from every laborer in its employ.

The City Council of Richmond has passed, over the Mayor's veto, an ordinance requiring all persons not vaccinated within twelve months to be vaccinated.

Female Doctors in Russia.

The female candidates for entering upon the study of medicine in Russia keep ever increasing. The normal number of admissions is fixed at seventy, but the actual number of applicants now amounts to more than double that number. The total number of female students that have been admitted within ten years have been 959, and of these 281 appear to have terminated their studies, and 152 been admitted to the practice of medicine.

Items.

—A boy nine years of age recently died from the effects of chloroform, administered in the Children's Hospital at Manchester, England.

—Daniel Webster once took a young lady to task for wearing short sleeves, and reflected severely on bare arms. "Why, Mr. Webster," exclaimed the young lady, "I'm astonished that you, the great expounder of the Constitution, should object to bare arms!" "What has my expounding the Constitution got to do with it?" growled Daniel; to which the young lady replied, "Does not the Constitution say that the right to *bear arms* shall not be interfered with?" History does not record the effect of this shot, but Webster died that same year.

—A western paper makes mention of a place in the far West destined to be the "Mecca" of bald-headed men, since, owing to some peculiarity of climate or water, the most luxuriant growth of hair is soon produced upon the baldest heads. This must be truly a most extraordinary place.

—Sir Erasmus Wilson, President of the Royal College of Surgeons of England, has given $50,000 for the purpose of founding a chair of Pathological Anatomy in the University of Aberdeen.

I Pede Prospero.

The following is from the London *Lancet*:—

A glad good morrow to my friend,
Of the great Æsculapius noble son!
To his famed votary, oh send
Success in years to come!

May great prosperity attend
His ceaseless efforts to amend
The suffering and pain and grief
In this sad world. What a relief
To feel that life is spent in doing good!

Though weary oft, take courage!
The noblest aim will triumph in the end,
For youth will bless, and hoary age will lend
A voice to speak thy praise!

Go on and prosper; may each year increase
In joy and hope, till crowned in the end
By well-earned laurels.
Such the good wishes that I fain would send,
With many a glad good-morrow, to my friend.

M. D. M.

QUERIES AND REPLIES.

E. T. S., of Fla., asks for the best local treatment for spinal irritation, to allay pain, etc.

P. O. G.—Fournier's work, entitled, "Syphilis and Marriage;" translated by Dr. Morrow, has been published, and we can send it to you. Price $2.00.

MARRIAGES.

McKNIGHT—LOUNSBURY.—On Wednesday, Feb. 15, at the residence of the bride's parents, Kingston, N. Y., by the Rev. J G. Van Slyke, assisted by the Rev. Dr. Demarest, Kate DuBois, daughter of the Hon. Wm. Lounsbury, and Dr. Charles Scott McKnight, of Plainfield, N. J.

VESTAL—PRIDE.—On Tuesday evening, Feb. 14, 1882, at the house of the bride's mother, Mrs. Letitia Diffenbaugh, by Rev. J. D. Boone, of Morrelton, Arkansas, V. S. Vestal, M.D., and Miss Nannie E. Pride, all of Dripping Springs, Arkansas.

DEATH.

BRIDGES.—On the 20th inst., Robert Bridges, M.D., Emeritus Professor of the College of Pharmacy, in the seventy-sixth year of his age.